ORDER NO. HAD8804122C8

Service Manual

Amplifier

Stereo Integrated Amplifier

SU-X950

Color

(K).....Black Type

Area

Color	Area
(K)	(E) .....Continental Europe.
(K)	(EH).....Holland.
(K)	(XL) .....Australia.
(K)	(XA).....Asia,Latin America,Middle Near East,Africa and Oceania.
(K)	(EK).....United Kingdom.
(K)	(EB).....Belgium.
(K)	(EF) .....France.
(K)	(EG).....F.R.Germany.
(K)	(Ei) .....Italy.
(K)	(XB).....Saudi Arabia.

SPECIFICATIONS

(DIN 45 500)

■ AMPLIFIER SECTION

DIN power output	
1 kHz THD:1%	2 x 60 W (8Ω)
Total harmonic distortion	
rated power at 1 kHz	1% (8Ω)
Harmonic distortion	
half power at 1 kHz	0.009% (8Ω)
Residual hum and noise	0.2 mV
Damping factor	30 (8Ω)
Input sensitivity and impedance	
PHONO	3mV/47 kΩ
TUNER,AUX,TAPE 1,TAPE 2	150mV/22 kΩ
CD,DAT	200mV/22 kΩ
Maximum input voltage (1 kHz,RMS)	
PHONO	100 mV
S/N (rated power 8Ω)	
PHONO	75 dB (IHF,A:79 dB)
TUNER,CD,AUX,TAPE 1,TAPE 2	82 dB (IHF,A:83 dB)
Frequency responce	
PHONO	RIAA standard curve ± 0.8dB(30 Hz ~ 15 kHz)
TUNER,CD,AUX,TAPE 1,TAPE 2 DAT	15 Hz ~ 55 kHz (-3 dB)
Tone controls	
BASS	50 Hz, +10 dB ~ -10 dB
TREBLE	20 kHz,+10 dB ~ -10 dB
Muting	-20 dB
Super bass	70 Hz,+10 dB
Output voltage	
TAPE 1,TAPE 2,REC OUT	150 mV
Channel balance,AUX 250 Hz ~ 6,300 Hz	±1.0 dB
Channel separation, AUX 1 kHz	60dB
Headphones output level and impedance	520 mV/330 Ω
Load impedance	
MAIN or REMOTE	8 Ω ~ 16 Ω
SURROUND	8 Ω ~ 16 Ω

■ GENERAL

Power consumption	290 W
Power supply	
For United Kingdom and Australia	AC 50 Hz/60 Hz,240V
For continental Europe	AC 50 Hz/60 Hz,220V
For others	AC 50 Hz/60 Hz,110V/127V/220V/240V
Dimensions (W x H x D)	360 x 128 x 300 mm (14-3/16″ x 5-1/32″ x 11-13/16″)
Weight	6.6 kg (14.5 lb.)

Notes:

1.Specifications are subject to change without notice. Weight and dimensions are approximate.

2.Total harmonic distortion is measured by the digital spectrum analyzer (H.P. 3045 system).

Technics

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Central P.O. Box 288, Osaka 530-91, Japan

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■ BEFORE REPAIR

(1)Turn off the power supply. Using a 10Ω, 5W resistor connect both ends of power supply capacitors(C701,C702,6800μF) in order to discharge the voltage.

(2)Before turning the power supply on , after completion of repair , slowly apply the primary voltage by using a power supply voltage controller to make sure that the consumed current at 50Hz/60Hz in NO SIGNAL mode should be shown below with respect to supply voltage 110V/127V/220V/240V.

Power supply voltage	AC110V	AC127V	AC220V	AC240V
Consumed current 50Hz	173 ~ 519mA	160 ~ 480mA	87 ~ 259mA	80 ~ 239mA
Consumed current 60Hz	166 ~ 498mA	153 ~ 460mA	83 ~ 249mA	77 ~ 230mA

■ PROTECTION CIRCUITRY

The protection circuitry may have operated if either of the following conditions is noticed:

* No sound is heard when the power is switched ON.
* Sound stops during a performance.

The function of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are "shorted" , or if speaker systems with an impedance less than the indicated rated impedance of this unit are used.

If this occurs, follow the procedure outlined below:

1.Switch OFF the power.

2.Determine the cause of the problem and correct it.

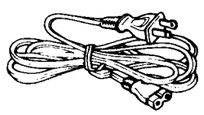
3.Switch ON the power once again.

Note:

When the protection circuitry functions, the unit will not operate unless the power is first switched OFF and then ON again.

■ ACCESSORY

Power supply cord 1



SJA173.....For (XL) area only.
SJA183.....For (XB) area only.
SJA168.....For (XA) area only.
SJA188.....For (EK) area only.
SFDAC05E03 .....For (E),(EG),(EF),(EH),(EB) and (Ei) areas.

■ LOCATION OF CONTROLS

●Front panel

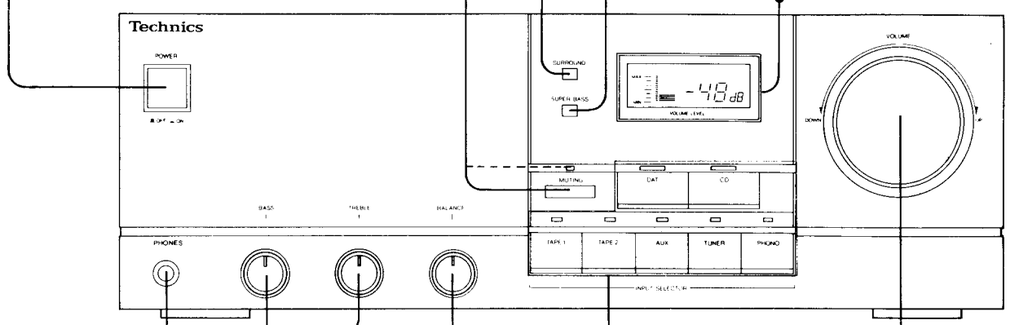
Audio muting switch/indicator (MUTING)
Press this switch when a disc is being changed or to temporarily reduce the volume level (approx. 1/10).

Power switch (POWER)

●Surround-sound switch (SURROUND)
This switch is used to switch the surround sound effect on and off. (The switch itself will be illuminated.)

Super bass switch (SUPER BASS)
When this switch is switched ON (the switch itself will be illuminate.), the ultra-low frequency range can be reinforced.

Volume-level indicator (VOLUME LEVEL)
The volume level is indicated in decibels (dB).
The dB indication numerically shows the attenuation characteristic of the amplifier; the indication ranges from "– –dB" (minimum) to "0 dB" (maximum).
The volume level becomes greater as the indication proceeds from –76 to –74 to –72 dB.



Balance control (BALANCE)
This control is used to adjust left/right volume balance.

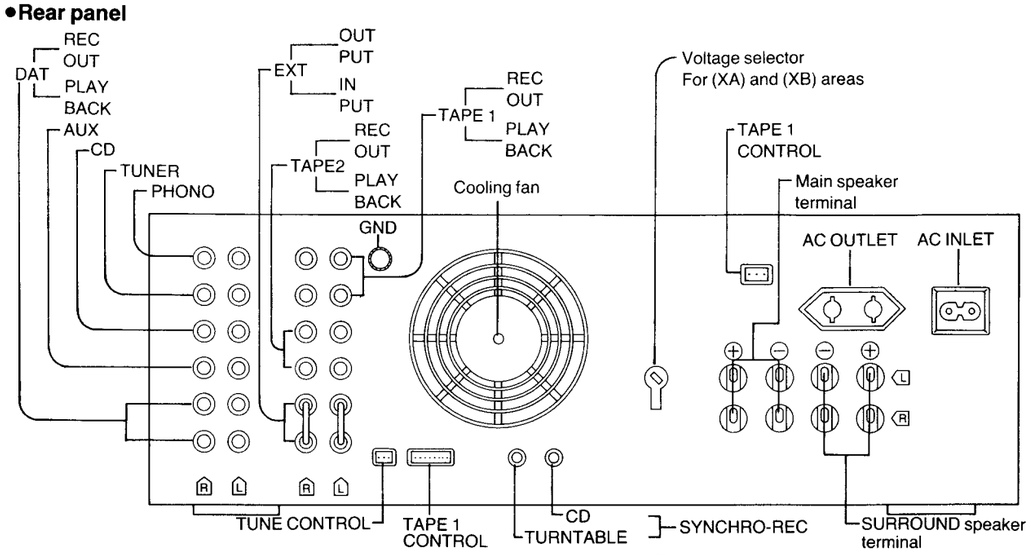
Volume control (VOLUME)
This control is used to adjust the volume level.

Tone controls (BASS/TREBLE)
The bass control is for the low-frequency sound range, and the treble control is for the high-frequency sound range.

Input selectors/indicators (INPUT SELECTOR)
These selectors are used to select the sound source to be heard, such as a disc, radio broadcasts, etc. The corresponding indicator illuminates during operation to indicate the selected sound source.

Headphones jack (PHONES)

●Rear panel

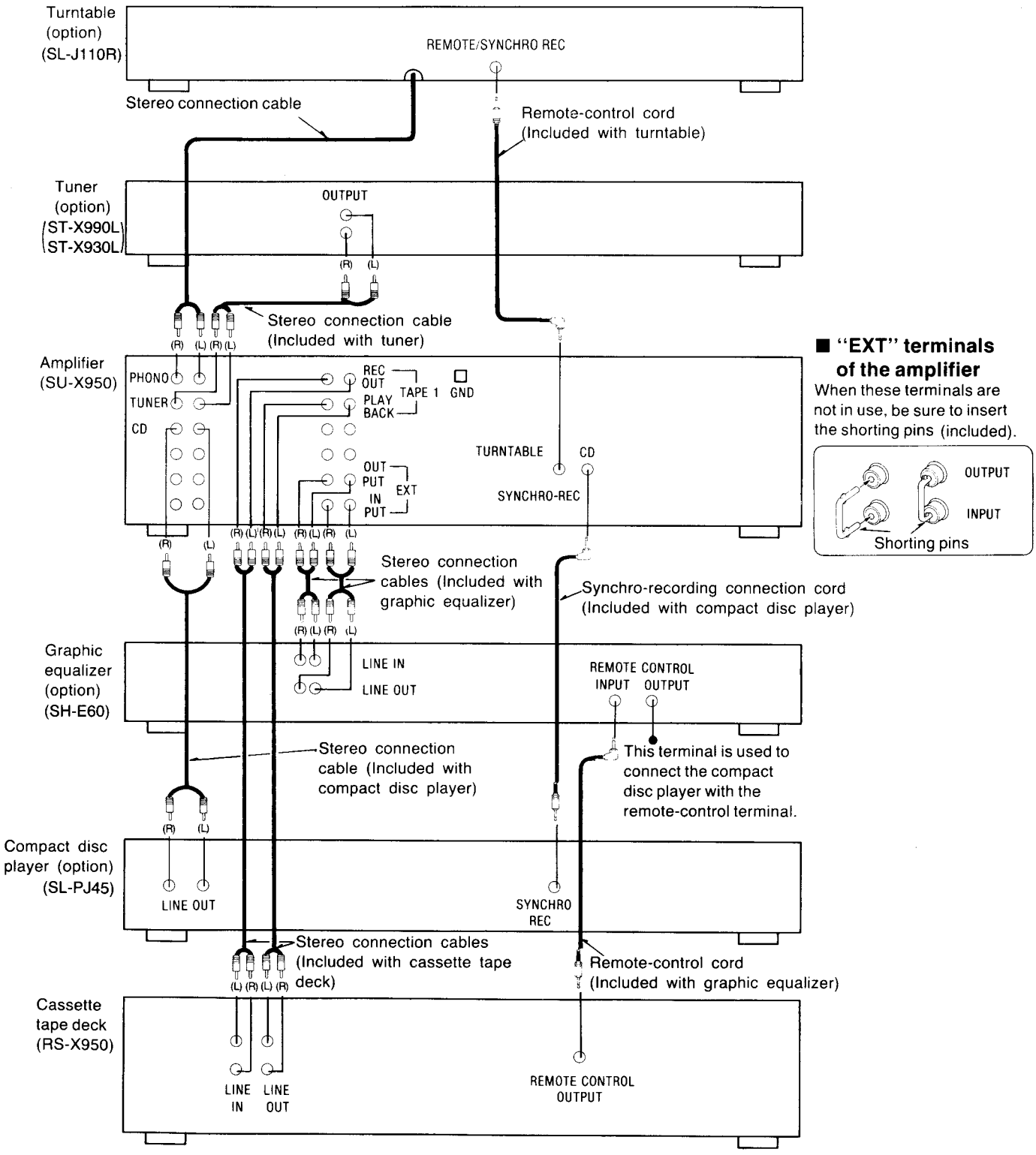


※**Phono input capacitance is about 100 pF.**

■ CONNECTIONS

1. Make the connections of the stereo connection cables, the synchro-recording connection cord (option), and the remote-control cords (option).

1. Although the synchro-recording connection cord and the remote-control cords are differentiated in the figure below, actually they are the same shape.
2. For a turntable with a ground terminal, be sure to connect wire to the "GND" terminal of the amplifier.



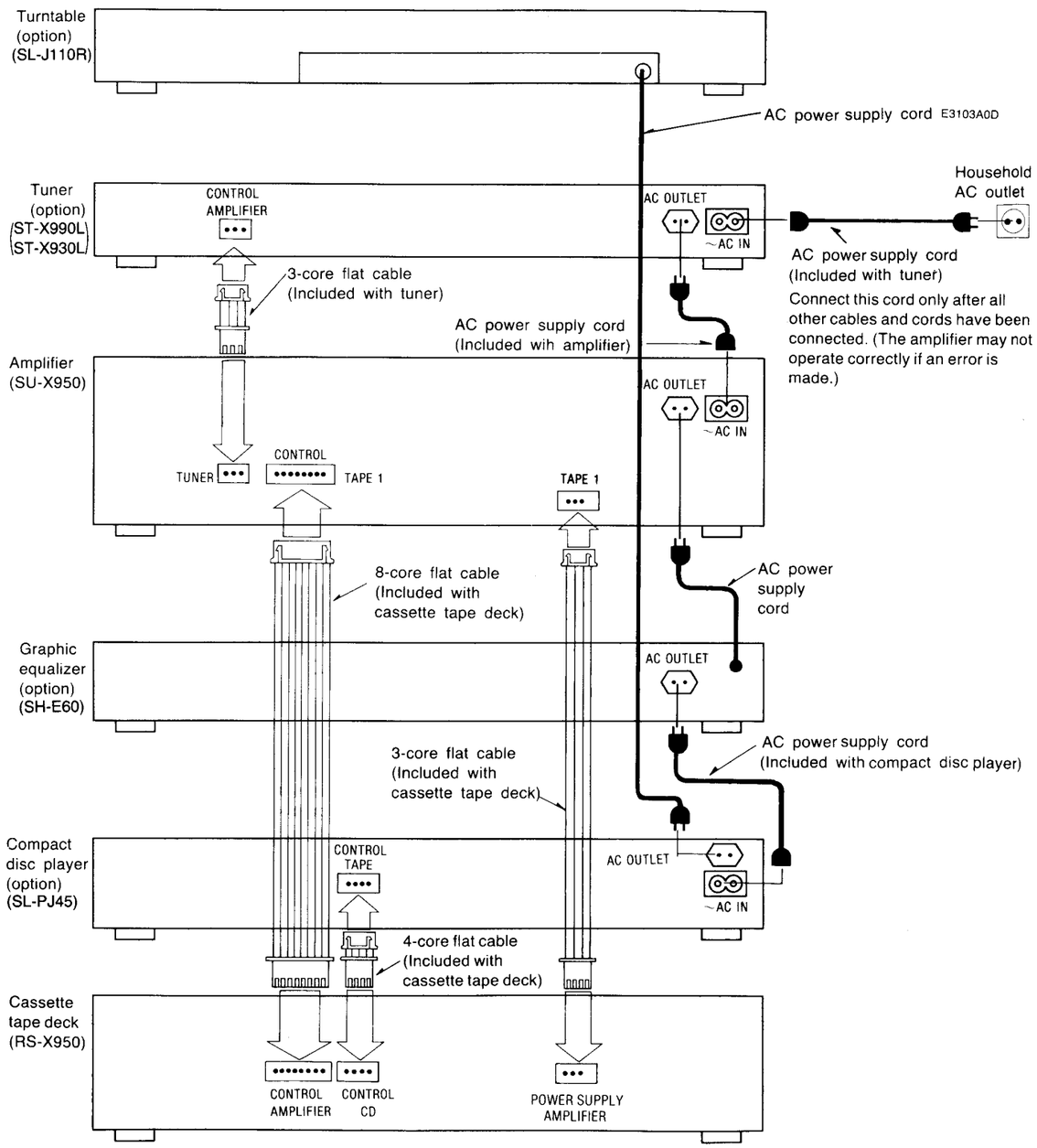
■ "EXT" terminals of the amplifier

When these terminals are not in use, be sure to insert the shorting pins (included).

2. Make the connections of the flat cables and the AC power supply cords.

1. Do not connect video-related equipment (such as a TV, etc.) to the AC outlets of these components. (These outlets are especially for audio equipment.) Also do not exceed the indicated power ratings when connecting to these outlets.
2. If the graphic equalizer is not used in combination with these components, connect the AC power supply cord of the compact disc player to the AC outlet of the amplifier. If the compact disc player is not used in combination with these components, connect the AC power supply cord of the turntable to the AC outlet of the graphic equalizer.

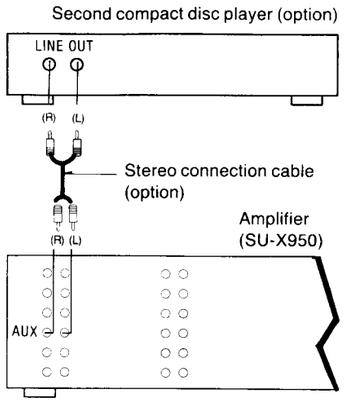
Note: The configuration of the AC outlet and AC power supply cord differs according to area.


Turntable (option) (SL-J110R)
AC power supply cord E3103A0D
Household AC outlet
Tuner (option) (ST-X990L) (ST-X930L)
CONTROL AMPLIFIER
AC OUTLET
~AC IN
AC power supply cord (Included with tuner)
Connect this cord only after all other cables and cords have been connected. (The amplifier may not operate correctly if an error is made.)
3-core flat cable (Included with tuner)
AC power supply cord (Included wih amplifier)
Amplifier (SU-X950)
CONTROL
TUNER
TAPE 1
TAPE 1
AC OUTLET
~AC IN
8-core flat cable (Included with cassette tape deck)
AC power supply cord
Graphic equalizer (option) (SH-E60)
AC OUTLET
3-core flat cable (Included with cassette tape deck)
AC power supply cord (Included with compact disc player)
Compact disc player (option) (SL-PJ45)
CONTROL TAPE
AC OUTLET
~AC IN
4-core flat cable (Included with cassette tape deck)
Cassette tape deck (RS-X950)
CONTROL AMPLIFIER
CONTROL CD
POWER SUPPLY AMPLIFIER

Connections to other equipment

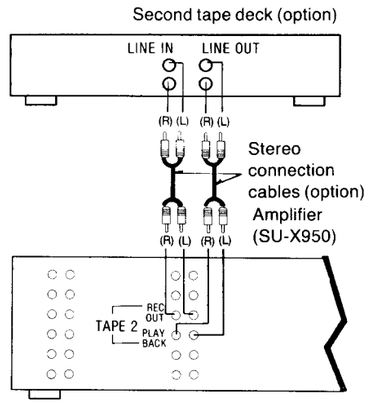
"AUX" terminals

Connect a second compact disc player, etc.



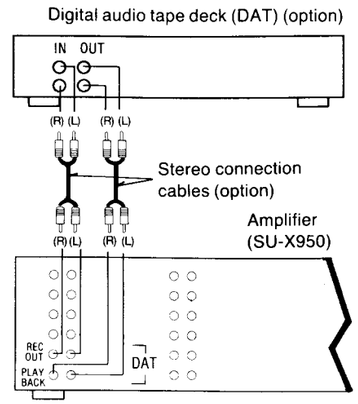
"TAPE 2" terminals

Connect a video cassette recorder (for audio only) or a second audio tape deck.



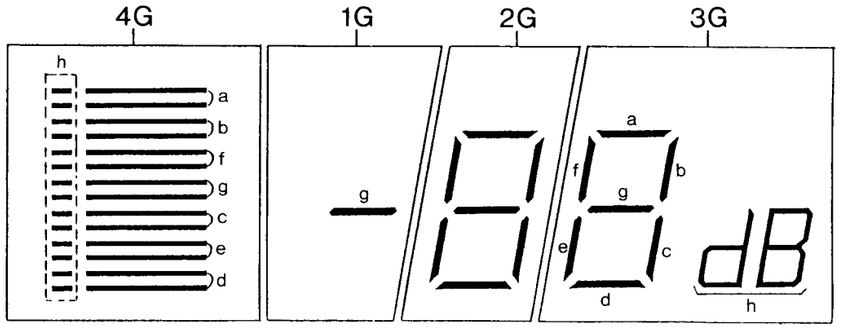
"DAT" terminals

Connect a digital audio tape deck (DAT).



■ DESCRIPTION OF FL PANEL

●GRID ASSIGNMENT



●PIN CONNECTION

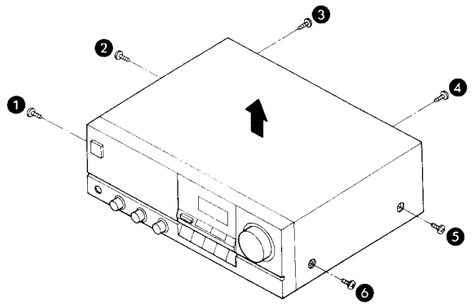
Pin No.	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Connection	F 2	F 2	N P	a	4 G	b	c	d	1 G	e	f	2 G	g	3 G	N P	h	3 G	N P	F 1	F 1

■ DISASSEMBLY INSTRUCTIONS

Ref. No. 1 — How to remove the cabinet

Procedure 1

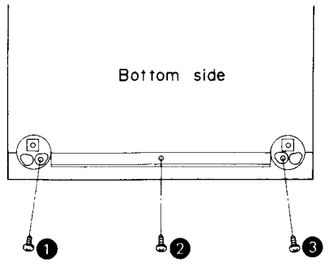
●Remove the 6 screws.

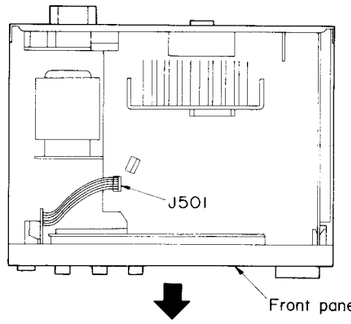


Ref. No. 2 — How to remove the front panel

Procedure 1→2

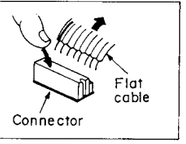
1. Remove the 3 screws (❶~❸).
2. Remove the flat cable (J501).
3. Remove the front panel in the direction of the arrow.





How to remove the flat cable

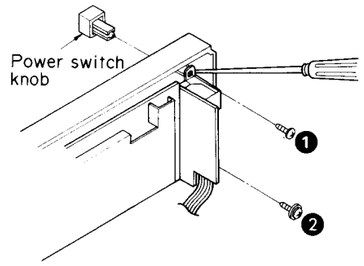
Pull out the flat cable while pressing the connector.



Ref. No. 3 — How to remove the power switch P.C.B.

Procedure 1→2→3

1. Remove the power switch knob by pushing it from behind the front panel.
2. Remove the 2 screws (❶, ❷).

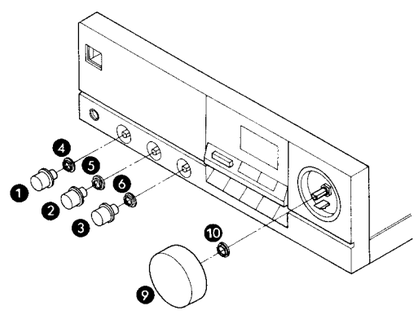


Ref. No. 4 — How to remove the microcomputer/FL P.C.B. and volume P.C.B.

Procedure 1→2→4

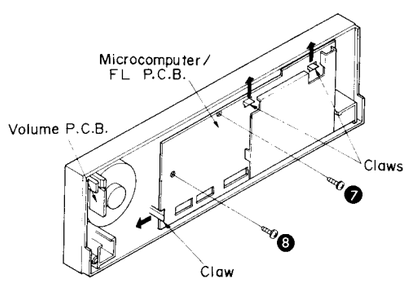
How to remove the volume P.C.B.

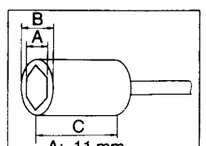
1. Remove the 1 knob (❾).
2. Remove the 1 nut (❿).



How to remove the microcomputer/FL P.C.B.

1. Remove the 3 knobs (❶~❸).
2. Remove the 3 nuts (❹~❻).
3. Remove the 2 scres (❼, ❽).
4. Push the 3 claws and remove the microcomputer/FL P.C.B.





●Use a wrench of the dimensions shown in the illustration above to remove nuts.

Ref. No. 5 — How to remove the surround/super bass P.C.B. and input selector switch P.C.B.

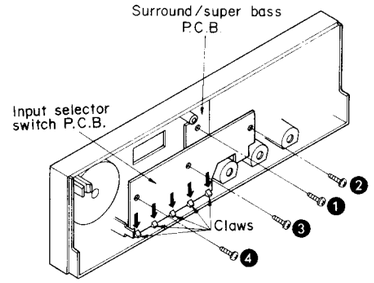
Procedure 1→2→4→5

How to remove the surround/super bass P.C.B.

●Remove the 1 screw (❶).

How to remove the input selector switch P.C.B.

1. Remove the 3 screws (❷~❹).
2. Push the 5 claws and remove the input selector switch P.C.B.



Ref. No. 6 — How to remove the tape input P.C.B., AC outlet P.C.B. and AC inlet P.C.B.

Procedure 1→6

How to remove the tape input P.C.B.

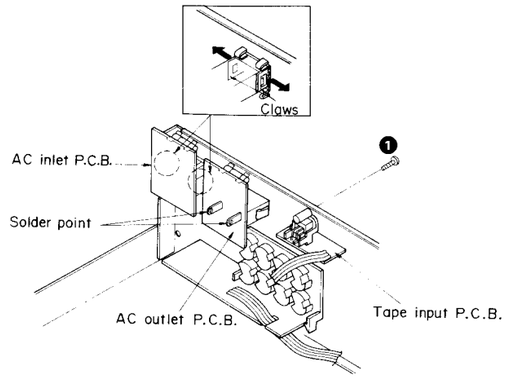
●Remove the 1 screw (❶).

How to remove the AC inlet

●Pull out the 2 claws in the direction of the arrow.

How to remove the AC outlet

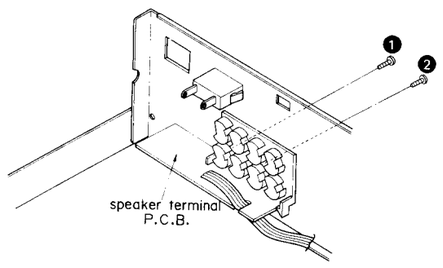
●Unsolder the 2 terminals.



Ref. No. 7 — How to remove the speaker terminal P.C.B.

Procedure 1→6→7

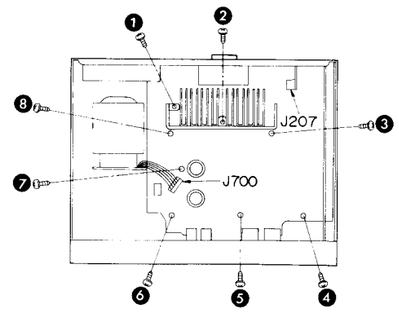
●Remove the 2 screws (❶, ❷).

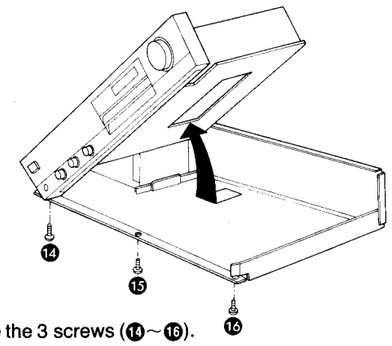


Ref. No. 8 — How to remove the main P.C.B.

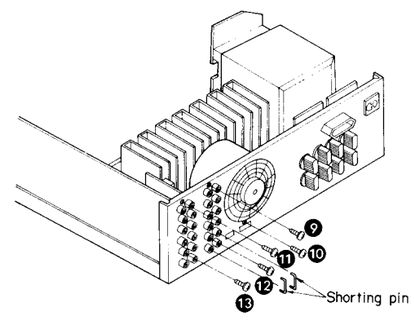
Procedure 1→8

1. Remove the 8 screws (❶~❽).
2. Remove the flat cable (J207, J700).



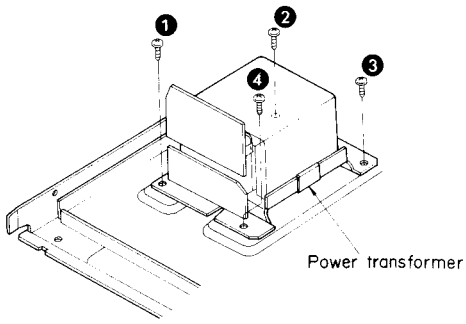


5. Remove the 3 screws (⓮~⓰).

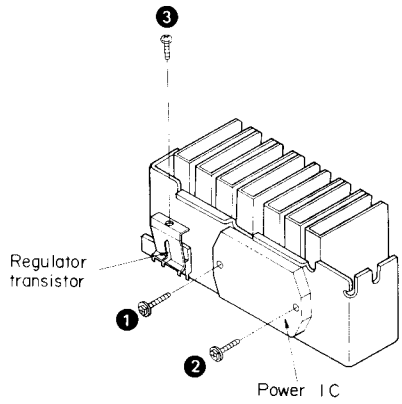


3. Remove the 5 screws (❾~⓭).
4. Remove the shorting pin.

Ref. No. 9	How to remove the power transformer
Procedure 1→6→7→9	•Remove the 4 screws (❶~❹).

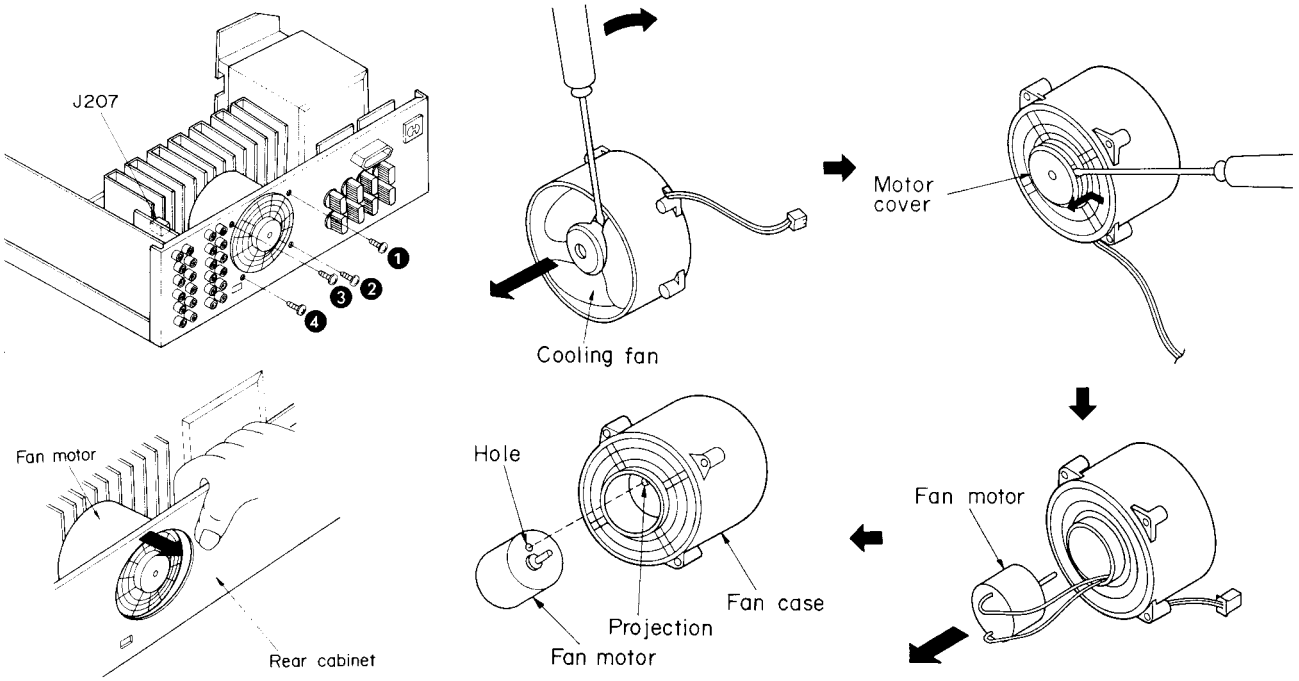


Ref. No. 10	How to remove the power IC and regulator transistor
Procedure 1→8→10	1. Unsolder the power IC or regulator transistor. 2. Remove the 3 screws (❶~❸).



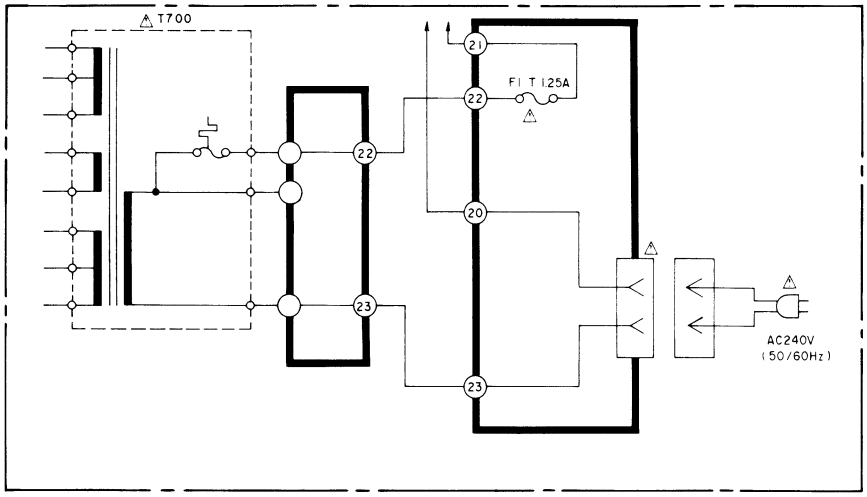
•When mounting the power IC or regulator transistor.
Apply silicone compound (SZZOL15) to the rear side of power IC or regulator transistor.

Ref. No. 11	How to remove the fan motor
Procedure 1→11	1. Pull out the 1 connector (J207). 2. Remove the 4 screws (❶~❹). 3. Press the rear cabinet in the direction of the arrow and remove the fan motor. 4. Insert a screwdriver at the root of the cooling fan. Force it out of the motor shaft. 5. Remove the motor cover by used ⊖ screwdriver. 6. Remove the motor from the fan casing. 7. When mounting the motor fan, align the fan casing's projection with the hole of the fan motor.

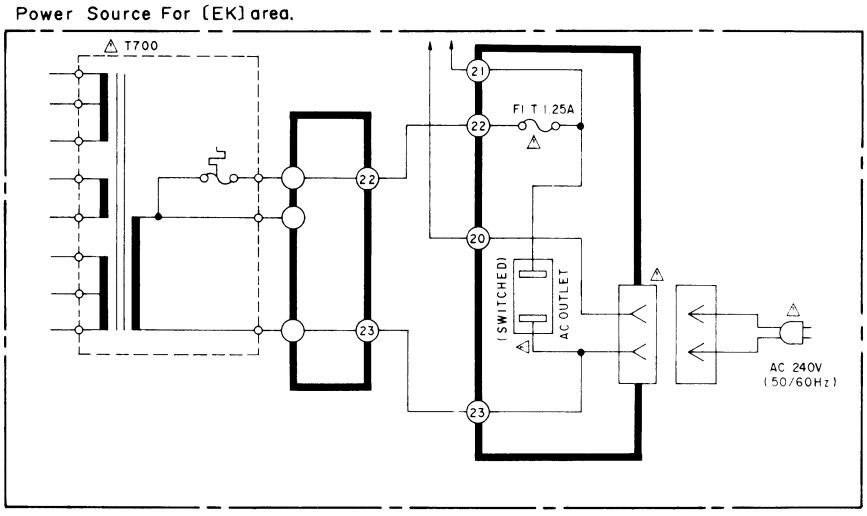


■ SCHEMATIC DIAGRAM

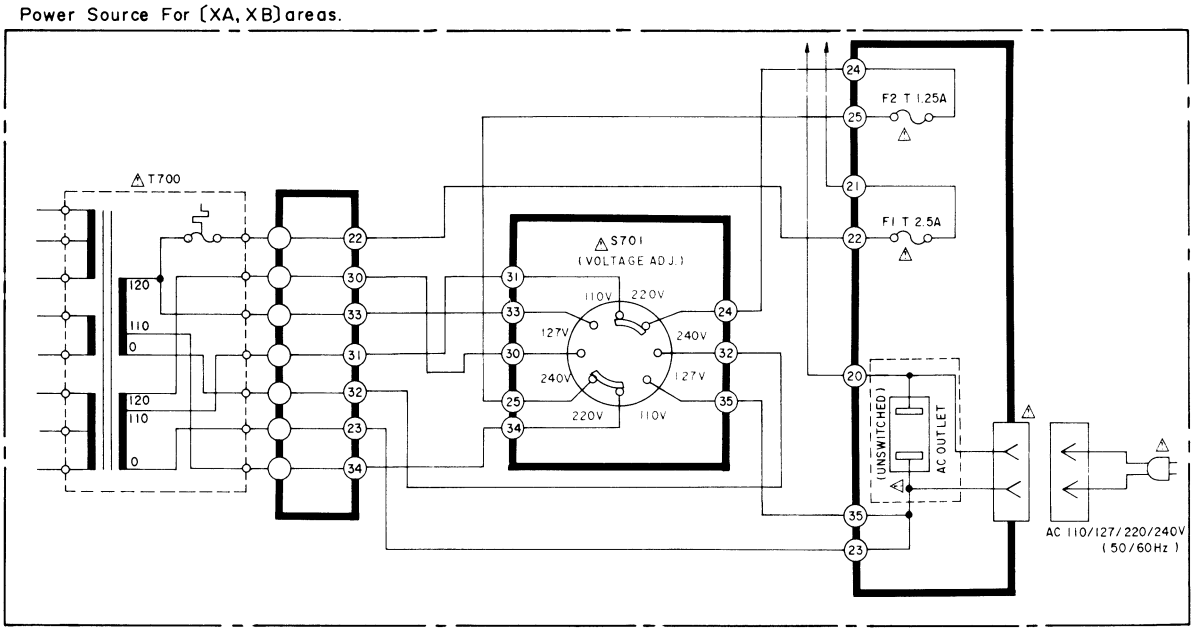
Power Source For [XL] area.

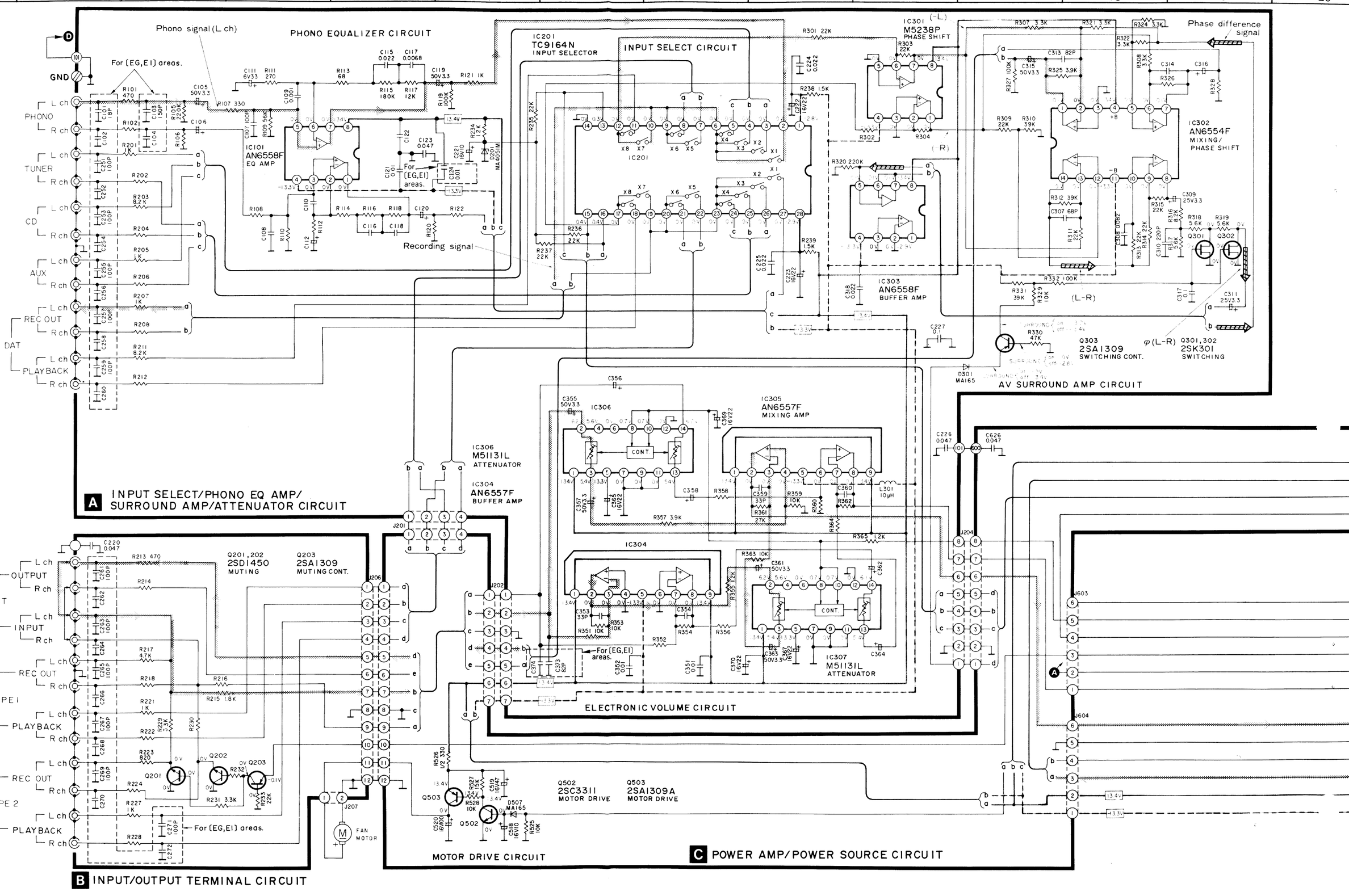


Power Source For [EK] area.



Power Source For [XA, XB] areas.




PHONO EQUALIZER CIRCUIT
INPUT SELECT CIRCUIT
Phono signal (L ch)
For (EG,EI) areas.
GND
PHONO
TUNER
CD
AUX
REC OUT
DAT
PLAYBACK
IC101 AN6558F EQ AMP
IC201 TC9164N INPUT SELECTOR
IC301 (-L) M5238P PHASE SHIFT
(-R)
IC302 AN6554F MIXING/ PHASE SHIFT
IC303 AN6558F BUFFER AMP
Phase difference signal
Recording signal
Q301
Q302
Q303 2SA1309 SWITCHING CONT.
φ(L-R) Q301,302 2SK301 SWITCHING
D301 MA165
AV SURROUND AMP CIRCUIT
IC305 AN6557F MIXING AMP
IC306 M5113IL ATTENUATOR
IC304 AN6557F BUFFER AMP
A INPUT SELECT/PHONO EQ AMP/ SURROUND AMP/ATTENUATOR CIRCUIT
EXT
INPUT
TAPE1
TAPE 2
OUTPUT
Q201,202 2SD1450 MUTING
Q203 2SA1309 MUTING CONT.
Q201
Q202
Q203
FAN MOTOR
IC307 M5113IL ATTENUATOR
ELECTRONIC VOLUME CIRCUIT
Q502 2SC3311 MOTOR DRIVE
Q503 2SA1309A MOTOR DRIVE
D507 MA165
MOTOR DRIVE CIRCUIT
B INPUT/OUTPUT TERMINAL CIRCUIT
C POWER AMP/POWER SOURCE CIRCUIT

21 22 23 24 25 26 27 28 29 30 31 32 33 34

D TONE AMP/SUPER BASS AMP/CONTROL/FL DRIVE CIRCUIT

SYSTEM CONTROL CIRCUIT

FL SADFV217

TONE AMP CIRCUIT

SUPER BASS AMP CIRCUIT

IC403 AN6558F TONE AMP

IC604 AN6552F BUFFER AMP

Q603 UN4211 LED DRIVE

IC402 AN6554F PRE AMP/B.P.FILTER

Q404,405 2SD1450 SWITCHING

Q403,406 2SA1309 SWITCHING CONTROL

Q407,408 2SD1450 MUTING

Q409 2SA1309 MUTING CONT

Q401,402 2SD1450 SWITCHING

Q621 2SC3311 SWITCHING

Q622 UN4211 SWITCHING

IC601 M50754-411SP MICRO COMPUTER

KEY SCAN OUT · LED DRIVE · GRID OUT · SEGMENT OUT · KEY RETURN IN

IC602 MN4030B LOGIC(OR)

IC603 MN4013B LOGIC(F-FLOP)

Q604 2SC3311 SWITCHING

Q601,602 UN4111 SWITCHING

From TUNER

From TAPE1

CONTROL

Phono signal (L ch)

Super bass signal

TURN TABLE (CD) SYNCHRO REC

VOLUME ENCODER

VR601 (VOLUME ENCODER)

E VOLUME CIRCUIT

NTROL/FL DRIVE CIRCUIT

SYSTEM CONTROL CIRCUIT

FL SADFV217

IC601
M50754-411SP
MICRO COMPUTER

IC604
AN6552F
BUFFER AMP

Q603
UN4211
LED DRIVE

Q604
2SC3311
SWITCHING

Q601
UN4111
SWITCHING

Q602
UN4111
SWITCHING

Q601,602
UN4111
SWITCHING

IC602
MN4030B
LOGIC(OR)

IC603
MN4013B
LOGIC(F-FLOP)

KEY SCAN OUT

LED DRIVE

GRID OUT

SEGMENT OUT

KEY RETURN IN

VOLUME ENCODER

SYNCHRO REC

VR601
(VOLUME ENCODER)

E VOLUME CIRCUIT

POWER AMP CIRCUIT

IC501
SV13203
POWER AMP

Q501
2SA992
RELAY DRIVE

IC701
AN78M05R
REGULATOR

Q703
UN4211
SWITCHING

Q704
2SB621
REGULATOR

POWER SOURCE CIRCU

H HEADPHONES
POWER SWITC

HEADPHONES

Phono signal (L

For (EG,EI) areas.

(270P)
For (EG,EI) areas.

For (EG,EI) areas.

For (EG,EI) areas.

Q618,619
UN4111
LED DRIVE

D641~645,649
MA165

D638
LN873RPLS

D631~633,636,637
LN846RP-C

D634,635
LN0202RP2

Q611~617
UN4211
LED DRIVE

D639
(SURROUND)

D640
(S.BASS)

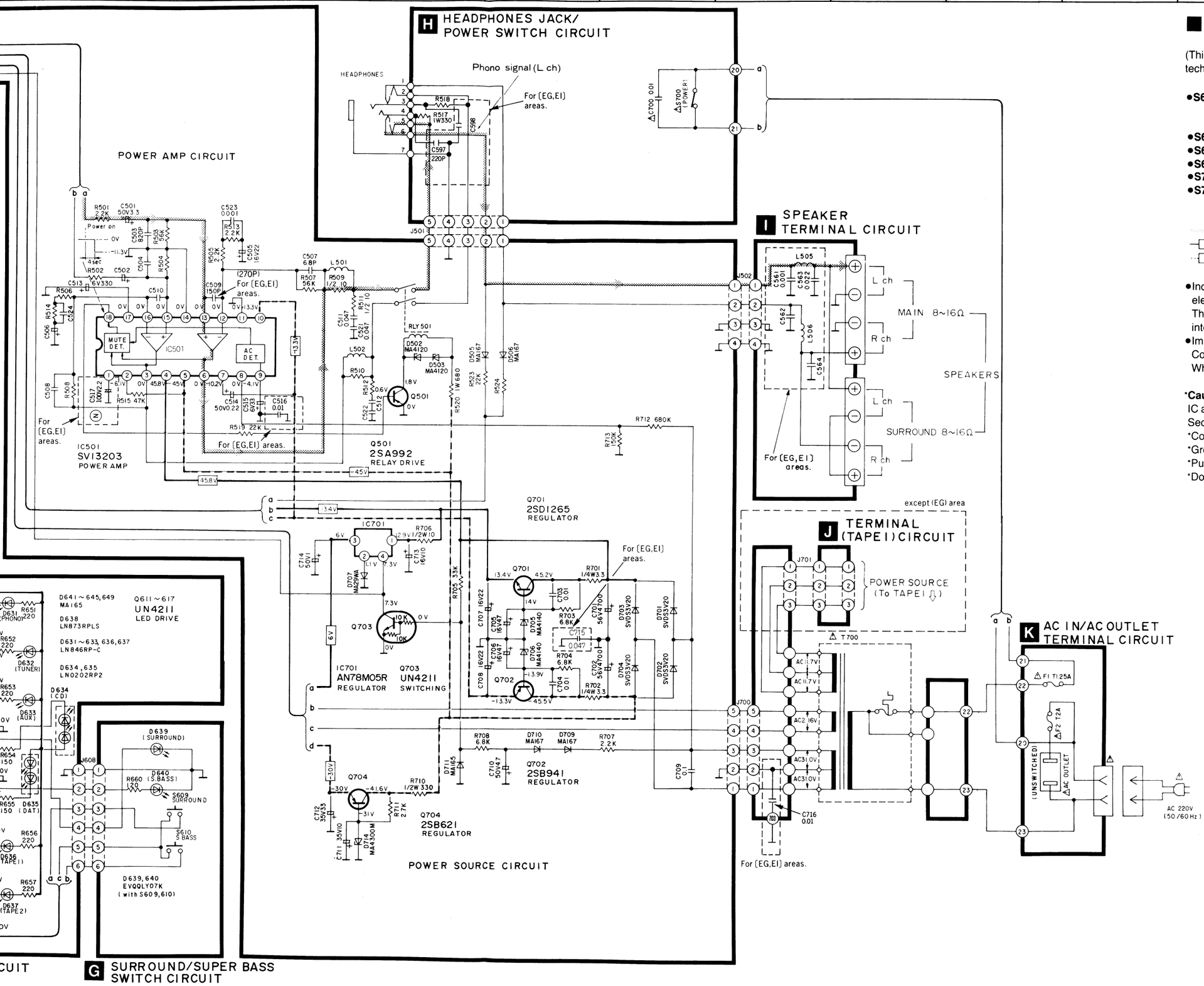
D609
SURROUND

S610
S.BASS

D639,640
EVQQLY07K
(with S609,610)

F INPUT SELECT SWITCH/LED CIRCUIT

G SURROUND/SUPER BASS SWITCH CIRCUIT



■ SCHEMATIC DIAGRAM

(This schematic diagram may be modified at any time with the development of new technology.)

- **●S601~S607** : Input selector switches
  S601: Phono, S602: Tuner, S603: CD, S604: Tape 1
  S605: Tape 2, S606: AUX, S607: DAT
- **●S608** : Audio muting switch.
- **●S609** : Surround-sound switch.
- **●S610** : Super bass switch.
- **●S701** : Power source switch in **"on"** position.
- **●S702** : Voltage selector switch in **"240 V"** position.
  For (XA) and (XB) areas **(110V↔127V↔240V↔220V)**

: Phono signal (Lch) : Recording signal.
: Positive voltage lines. : Super bass signal.
: Negatire voltage lines. : Phase difference signal.

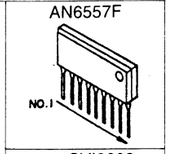
- ●Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.
- ●Important safety notice:
  Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

***Caution!**
IC and LSI are sensitive to static electricity.
Secondary trouble can be prevented by taking care furing repair.
*Cover the parts boxes made of plastics with aluminum foil.
*Ground the soldering iron.
*Put a conductive mat on the work table.
*Do not touch the legs of IC or LSI with the fingers directly.

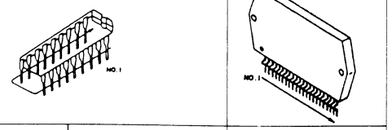
■ TERMINAL GUIDE OF IC'S, TRANSISTORS AND DIODES

AN6552F	8 pin	TC9164N	28 pin
AN6558F		M50754-411SP	46 pin
M5238P			
MN4013B	14 pin		
MN4030B			
AN6554F			

AN6557F



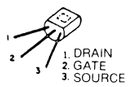
SVI3203



M51131L

AN78M05

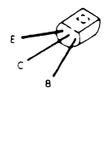
2SK301



UN4111

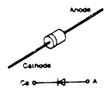
UN4211

2SB621A-R
2SA992

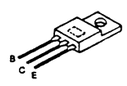


2SA1309
2SC3311

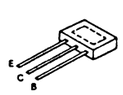
MA29WA MA165
MA167



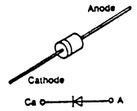
2SD1265-P
2SB941PQR



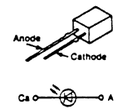
2SD1330R



MA700A

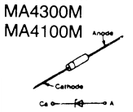


LN873RP-LS

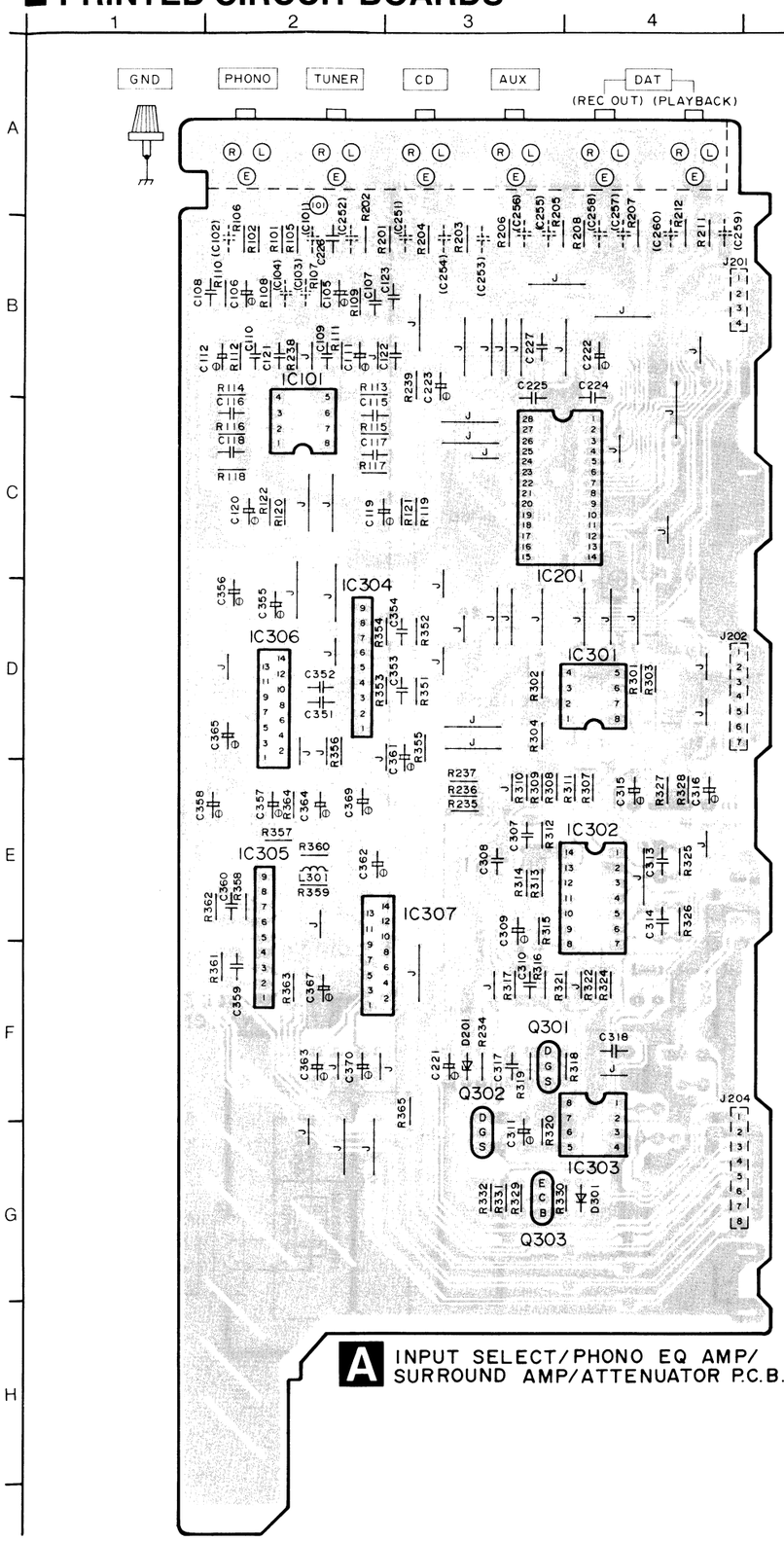


SVDS3V40

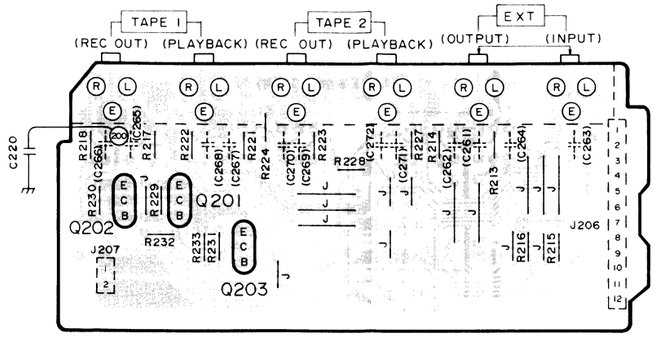
MA4140-M
MA4300M
MA4100M



■ PRINTED CIRCUIT BOARDS



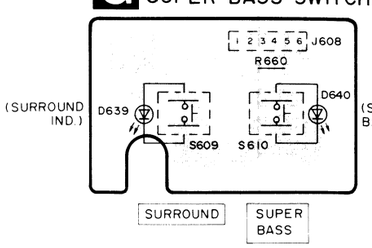
A INPUT SELECT/PHONO EQ AMP/ SURROUND AMP/ATTENUATOR P.C.B.

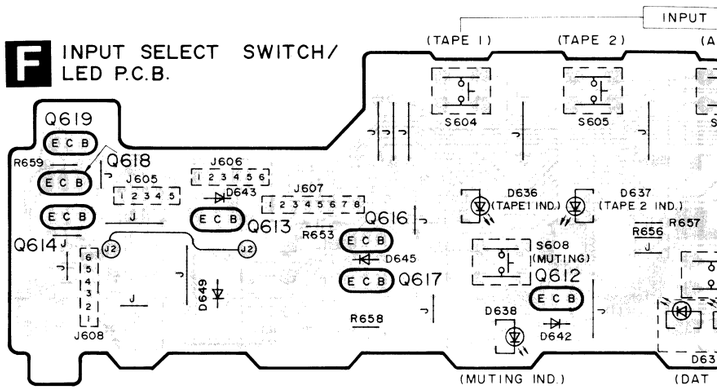


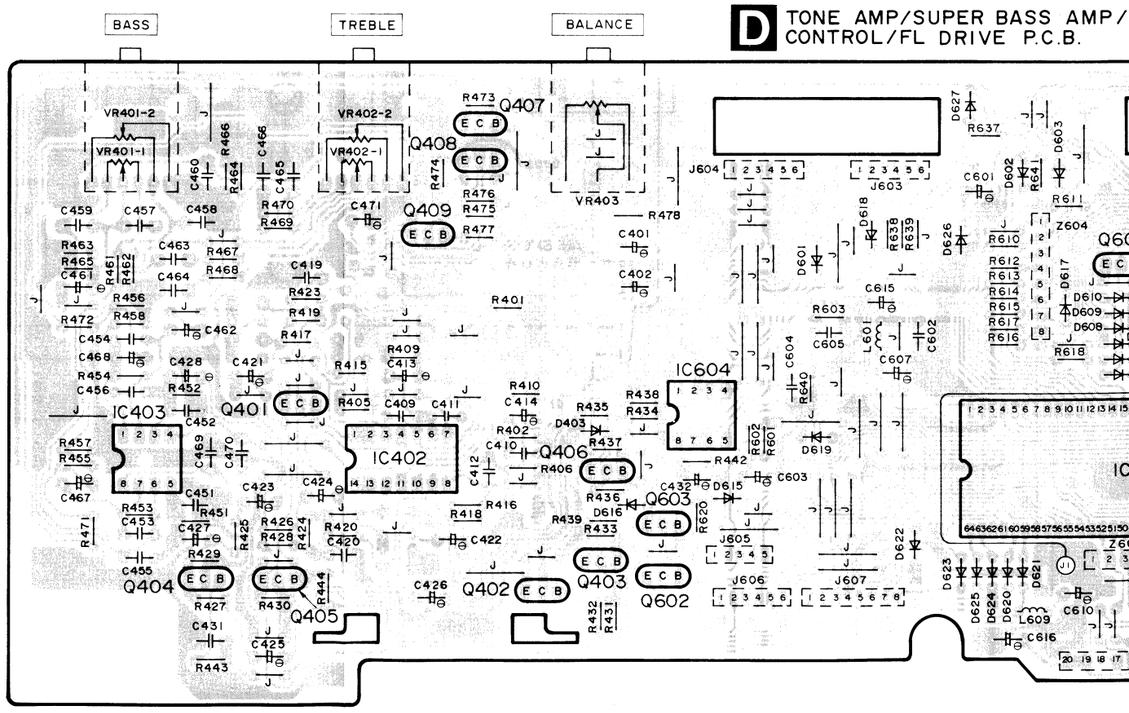
B INPUT/OUTPUT TERMINAL P.C.B.

Note:

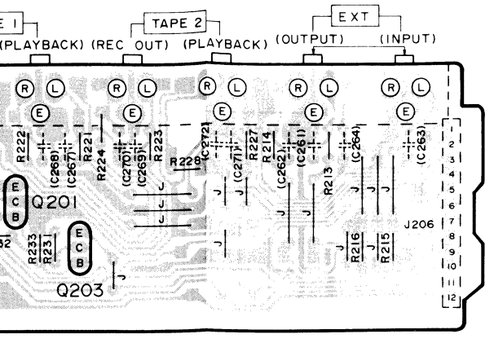
--(C)-- Capacitors indicated by (C) area used only in the EG (F.R.Germany), EI (Italy) areas.







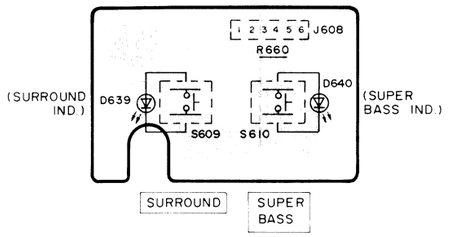
6 7 8 9 10 11 12 13 14 15 16 17 18 19



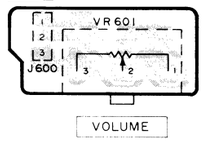
UT/OUTPUT TERMINAL
).

indicated by (C) area
n the EG (F.R.Germany),
reas.

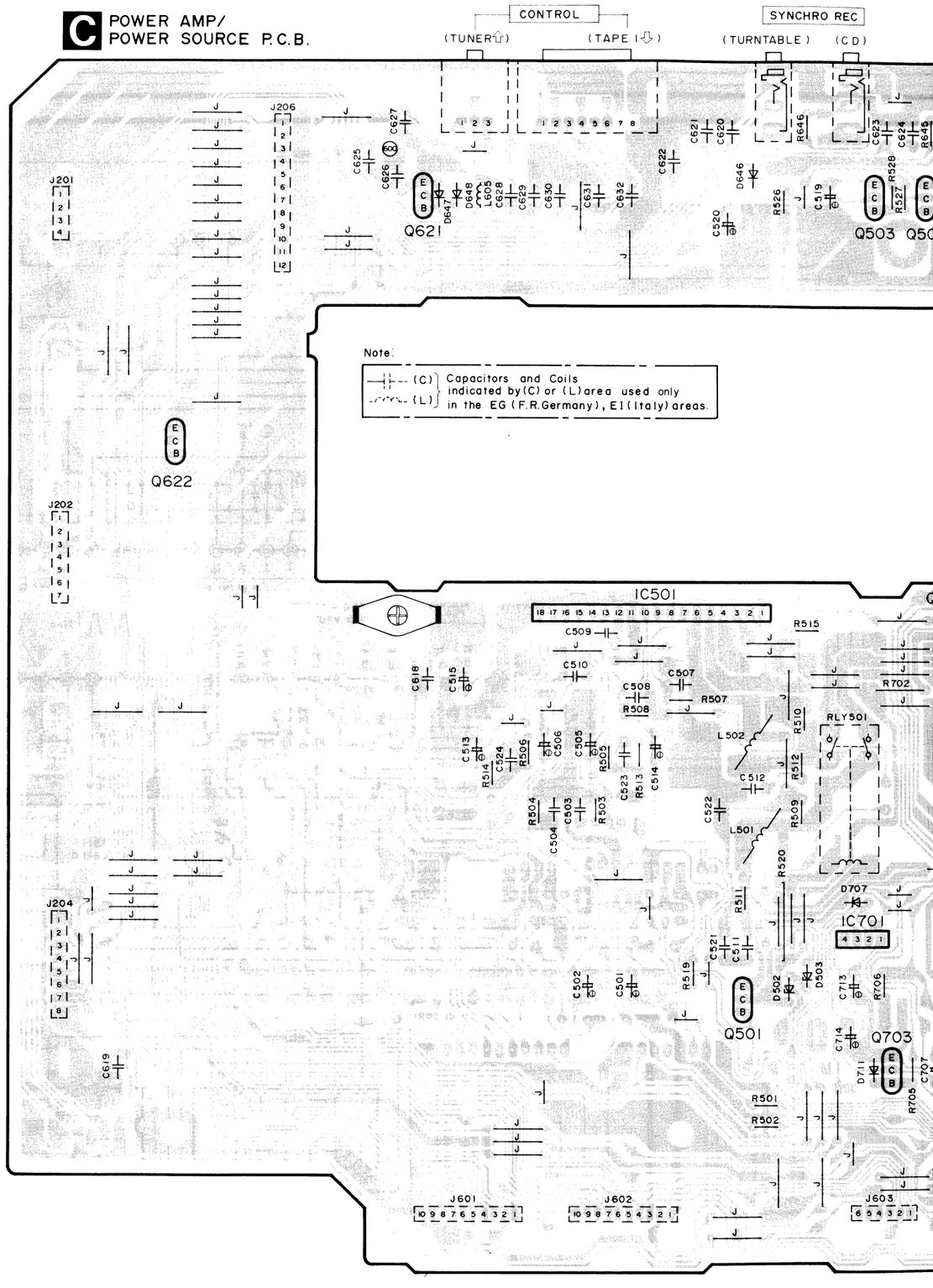
G SURROUND/ SUPER BASS SWITCH P.C.B.



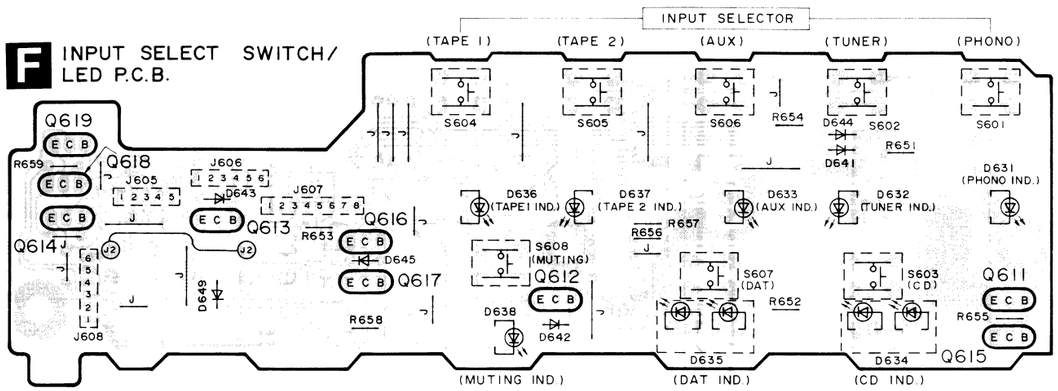
E VOLUME P.C.B.



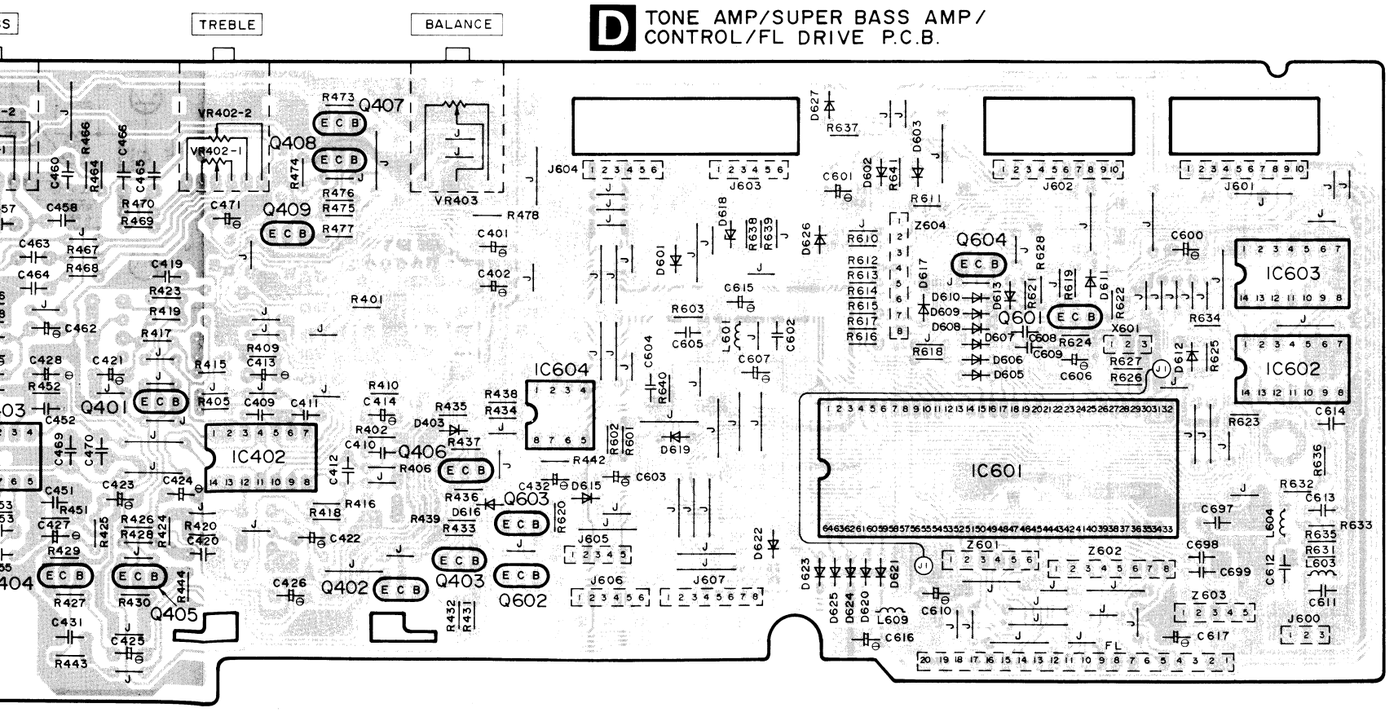
C POWER AMP/ POWER SOURCE P.C.B.



F INPUT SELECT SWITCH/ LED P.C.B.



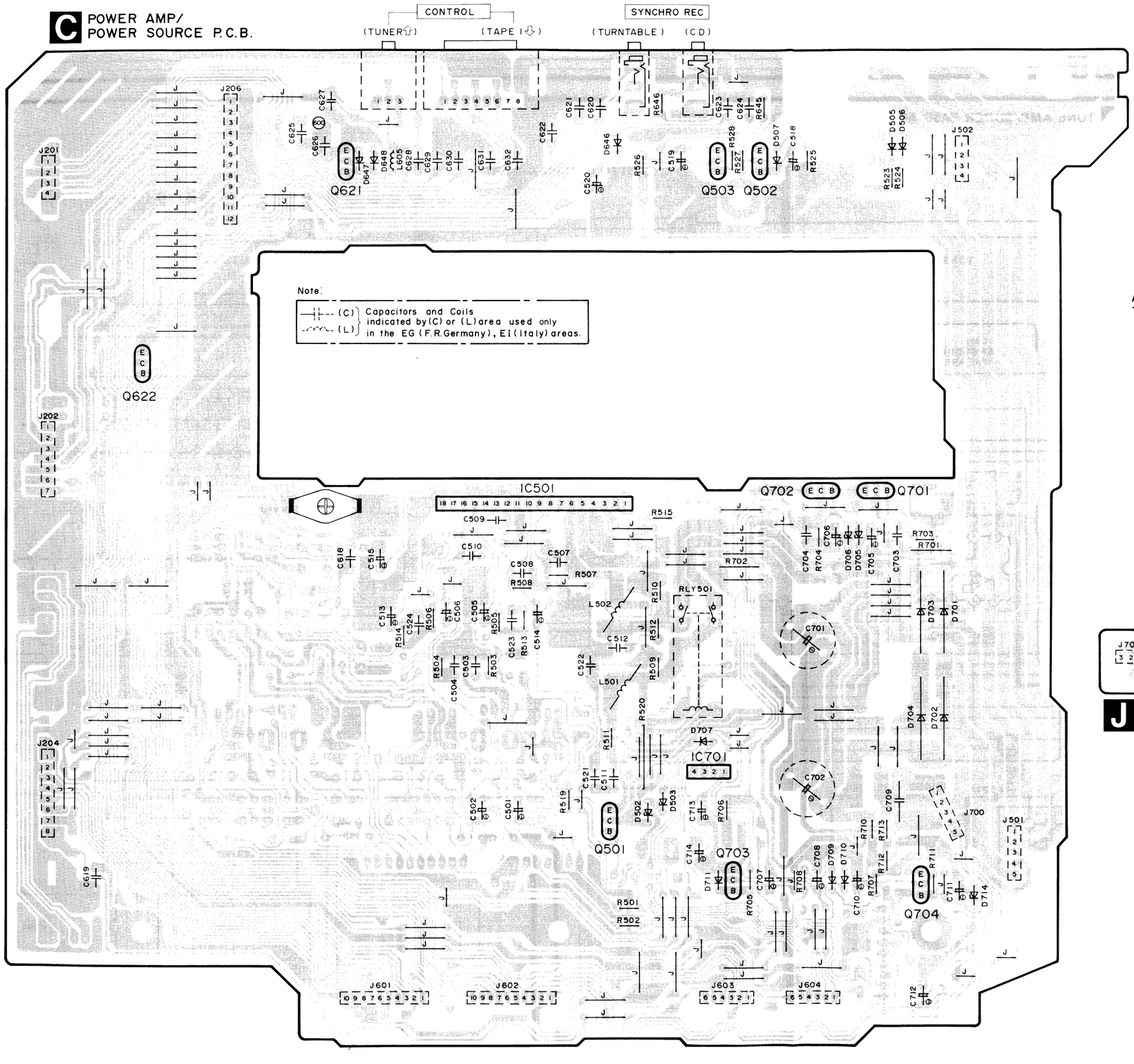
D TONE AMP/SUPER BASS AMP/ CONTROL/FL DRIVE P.C.B.



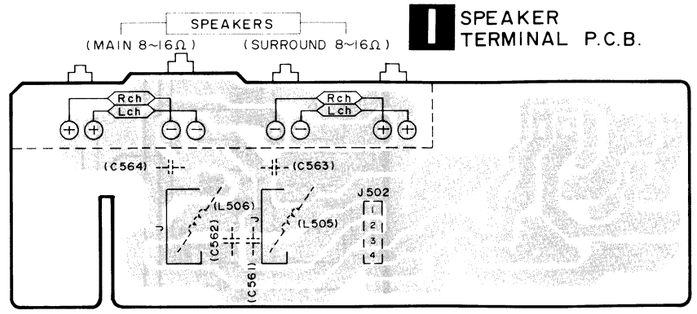
14 15 16 17 18 19 20 21 22 23 24 25 26 27

P.C.B.

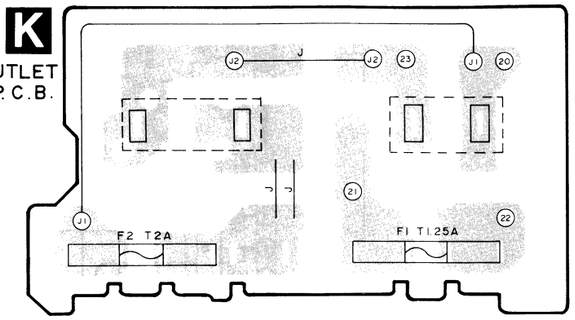
C POWER AMP/ POWER SOURCE P.C.B.



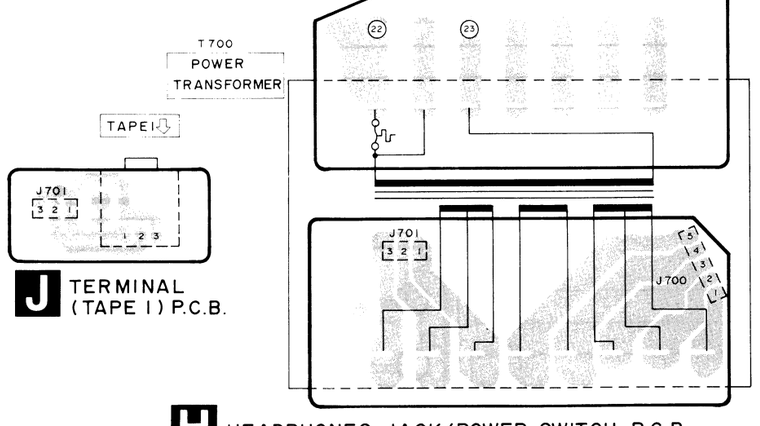
I SPEAKER TERMINAL P.C.B.



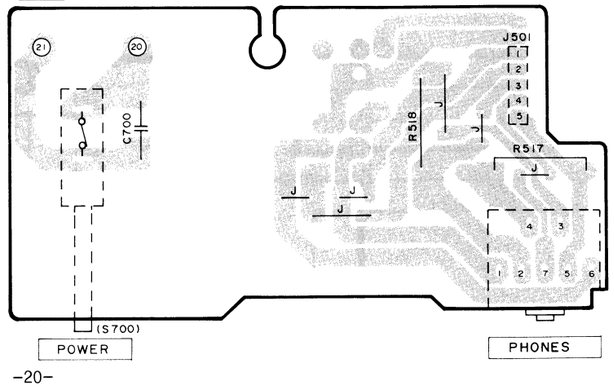
K AC IN/AC OUTLET TERMINAL P.C.B.



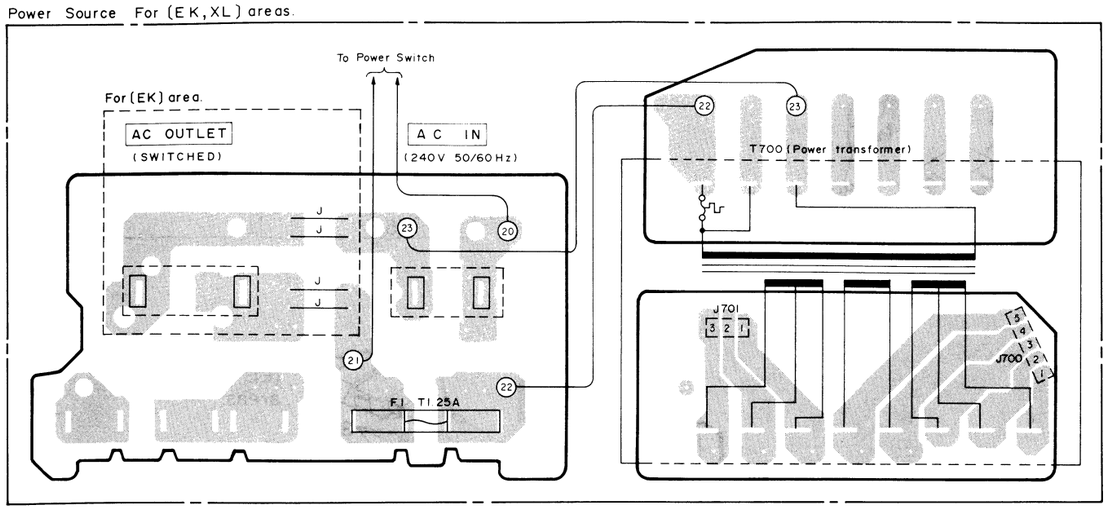
J TERMINAL (TAPE I) P.C.B.



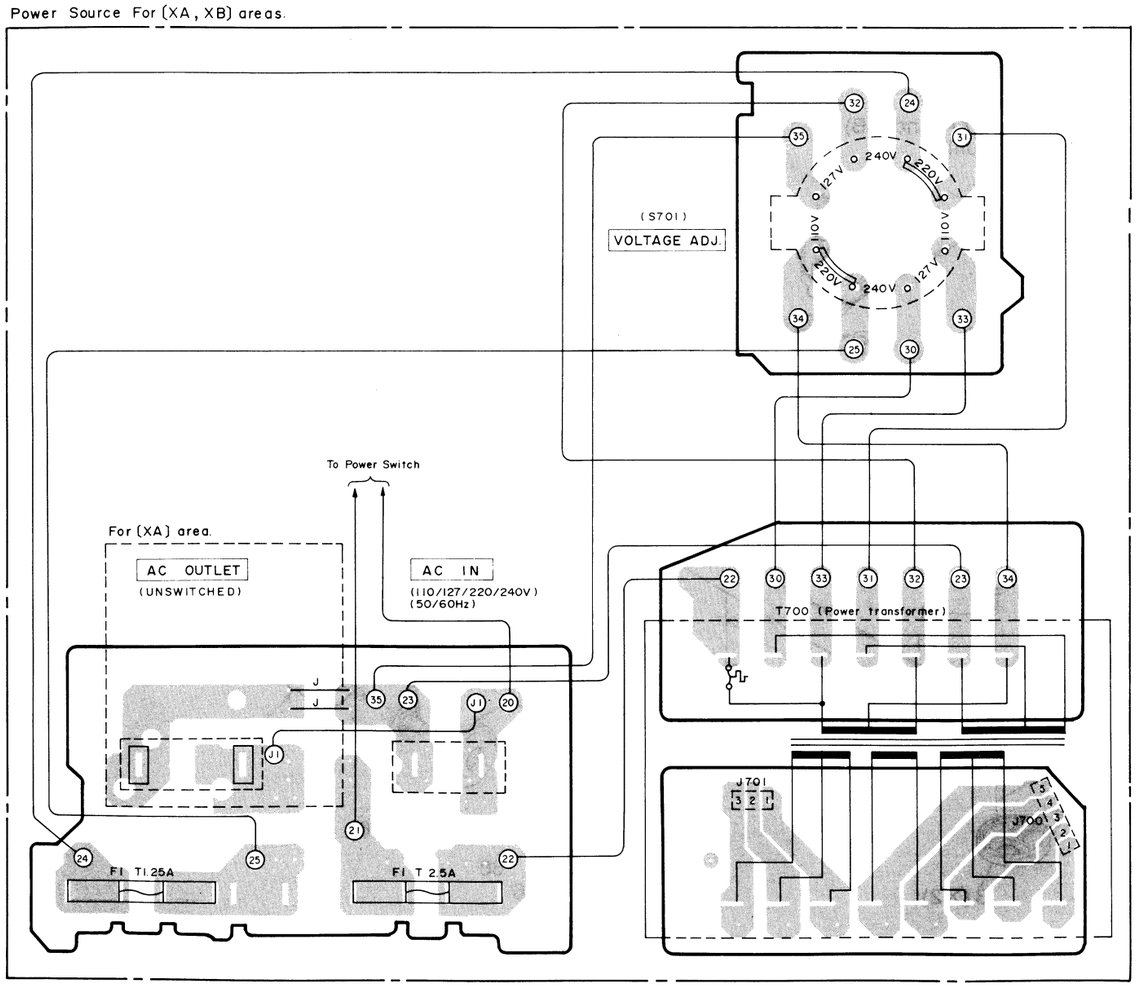
H HEADPHONES JACK/POWER SWITCH P.C.B.



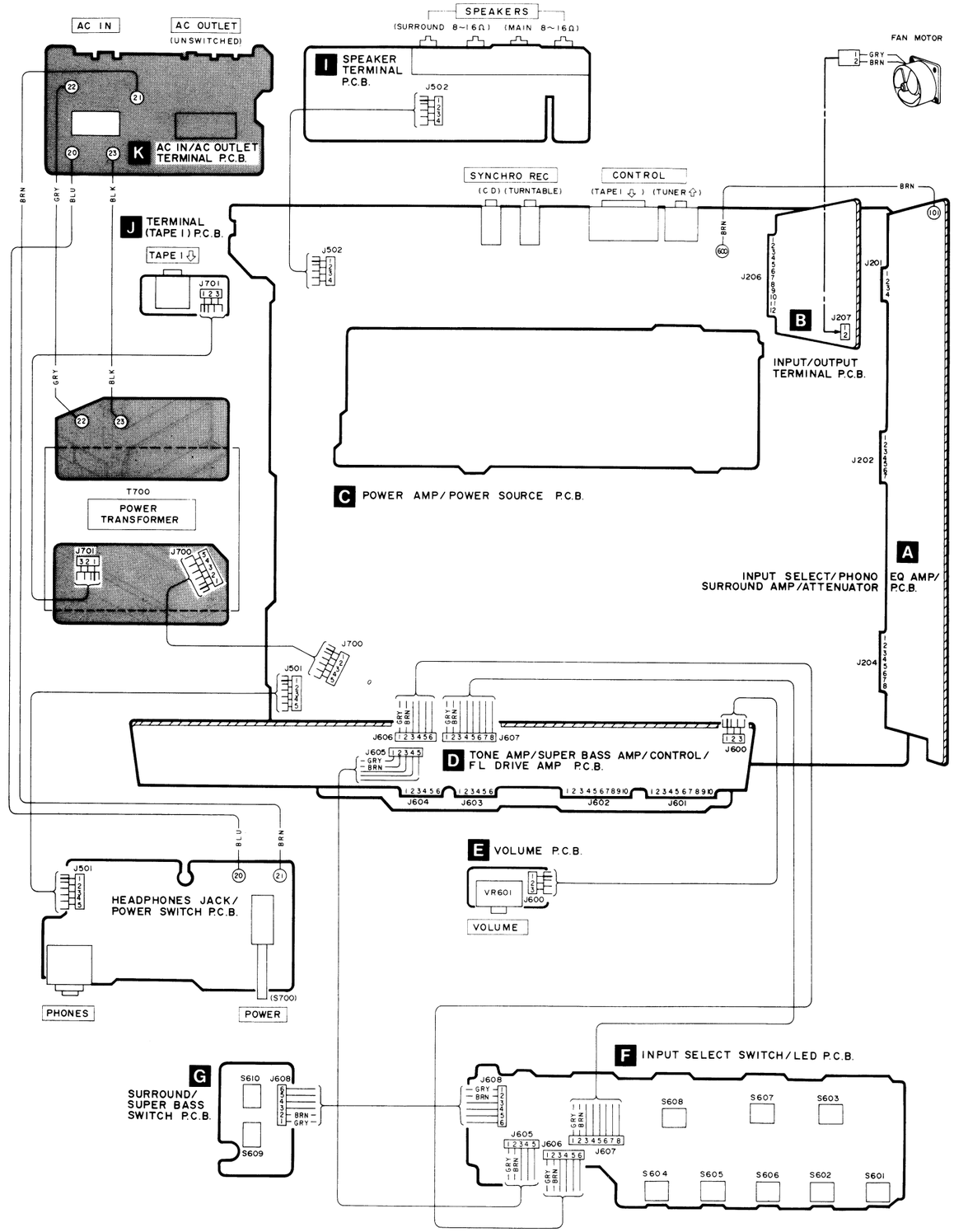
Power Source For (E K, XL) areas.



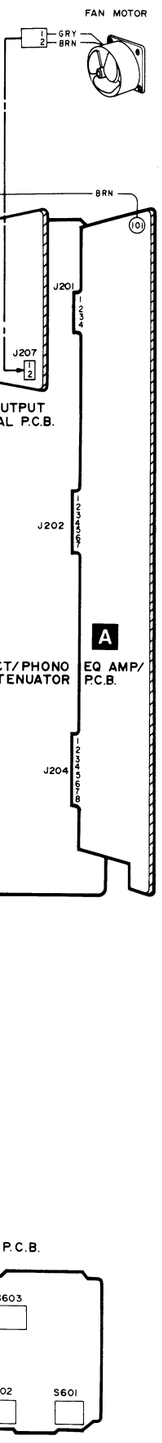
Power Source For (XA, XB) areas.

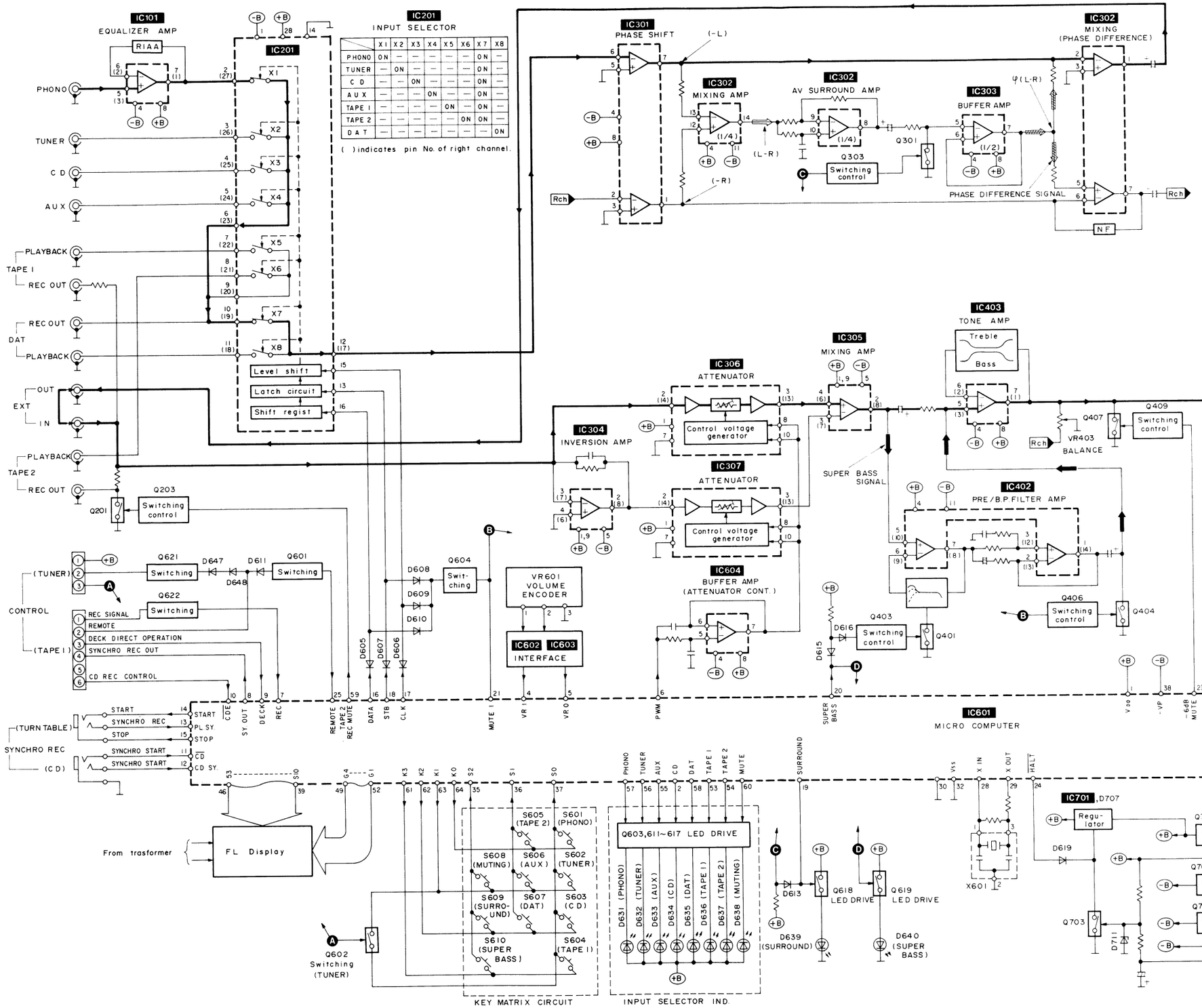


■ WIRING CONNECTION DIAGRAM



■ BLOCK DIAGRAM



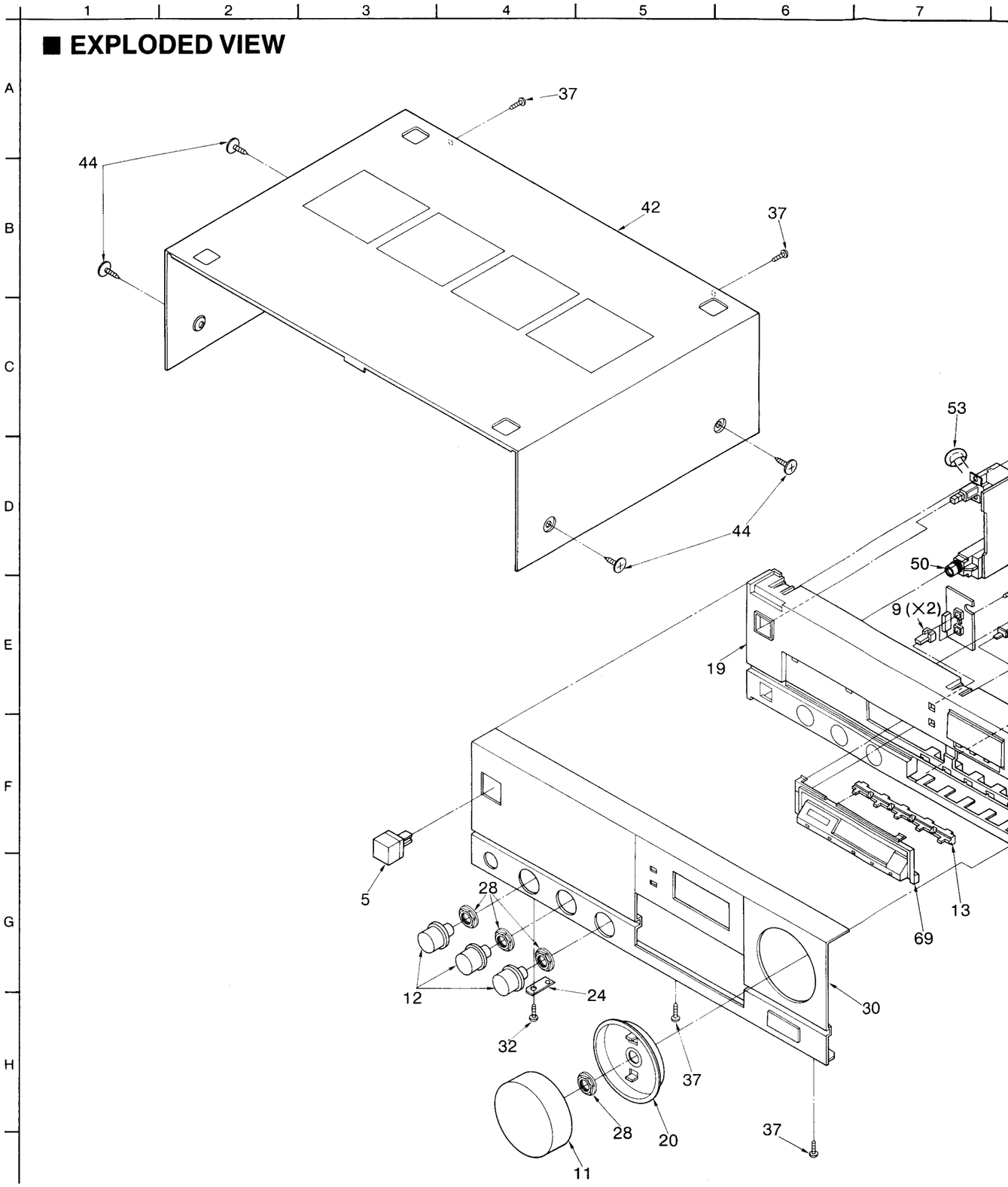


■ REPLACEMENT PARTS LIST

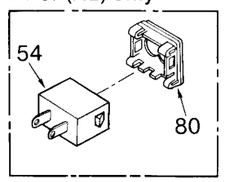
•CABINET PARTS LIST

Ref. No.	Part No.	Description
CABINET AND CHASSIS		
1	SJS9231A	AC INLET COVER
{EK, E, EH, EF}		
{EB, EG, EI}		
{XA, XB}		
2	SGP7170-1A	REAR PANEL
{E, EH, EF, EB}		
{EI}		
2	SGP7170-11A	REAR PANEL
{EG}		
2	SGP7170-2A	REAR PANEL
{EK}		
2	SGP7170-3A	REAR PANEL
{XL}		
2	SGP7170-4A	REAR PANEL
{XA}		
2	SGP7170-5A	PANEL
{XB}		
3	SKL307	FOOT
4	SKUUX950-KE	BOTTOM BOARD
{E}		
4	SKUUX950-KH	BOTTOM BOARD
{EH, EF, EB}		
{EG, EI}		
4	SKUUX950-KK	BOTTOM BOARD
{EK}		
4	SKUUX950-KL	BOTTOM BOARD
{XL}		
4	SKUUX950-KX	BOTTOM BOARD
{XA, XB}		
5	SBC666-1	BUTTON, POWER
6	SBC983B	BUTTON, SELECTOR
7	SBC1023	BUTTON, MUTING
8	SBC1024A	BUTTON, DIGITAL
9	SBC1025	BUTTON, BASS
11	SBN1224	KNOB, VOLUME
12	SBN1235	KNOB, TONE
13	SDL97	SMOKE PLATE
14	SDL98	SMOKE PLATE
15	SDL99	SMOKE PLATE
19	SGXUX950-KE1	FRONT GRILLE
20	SGX9036	ORNAMENT
21	SHE187-2	HOLDER
23	SJP9205-2Y	SHORTING PIN
24	SMC1274	BRACKET
25	SMN2040	ANGLE
26	SNE2118	SCREW
27	SNE2123	SCREW
28	SNE4021-1	NUT
29	SUS755	SPRING
30	SGWUX950-KE	FRONT PANEL
31	XTB3+6FFR1	SCREW
32	XTBS3+8JFZ1	SCREW
33	XTB3+20J	SCREW
34	XTB3+6FFZ	SCREW
35	XTB3+8G	SCREW
36	XTB3+8J	SCREW
37	XTB3+8JFZ	SCREW
38	XTW3+8T	SCREW
39	XTWS3+8T	SCREW
40	XYN3+C6FZ	SCREW
{XA, XB}		
42	SKC2070K163	CABINET BODY
44	SNE2129-1	SCREW
47	SJF4818-1	TERMINAL BOARD
49	SJJ141	M3 JACK
50	SJJ71E	JACK
51	SJS306	SOCKET
52	SJS804	SOCKET
53	SMX897	COVER
54 ⚠	SJS9231-1B	AC INLET
{EK, E, EH, EF}		
{EB, EG, EI}		
{XA, XB}		
54 ⚠	SJS9234B	AC INLET
{XL}		
55 ⚠	SJS9232B	AC OUTLET
{XA}		
55 ⚠	SJS9332B	AC OUTLET
{EK}		
56	SJT388	FUSE HOLDER
57	SGXUX950-KE2	FRONT GRILLE
58	SMN2056-1	BRACKET
59	SMN2056	BRACKET
60	SMN2043	ANGLE
61	SJF3062-13N	TERMINAL BOARD
62	SMC6453	SHIELD PLATE
63	SMC6441	SHIELD PLATE
64	SME95	COVER
65	SME97-1	COVER
66	SHE143	FAN
67	MMN6C2RKMS	DC MOTOR
68	SUS271	SPRING
69	SGX7977	ORNAMENT
70	SJS50680WL	CONNECTOR (6P)
70	SJS51080WL	CONNECTOR (10P)
72	SJT30543-V	CONNECTOR(5P)
75	SJT30439MB	CONNECTOR (4P)
75	SJT30739MB	CONNECTOR (7P)
75	SJT30839MB	TERMINAL PLATE
75	SJT31239MB	CONNECTOR (12P)
76	SJT30647WL	CONNECTOR (6P)
76	SJT31047WL	CONNECTOR (10P)
77	SJT3213	CONNECTOR(2P)
80	SJS9234A	AC INLET COVER
{XL}		
81 ⚠	SJS9225	AC OUTLET
{E, EH, EF, EB}		
{EG, EI}		
82	SJS9330A	AC OUTLET COVER
{XA}		
82	SJS9332A	AC OUTLET COVER
{EK}		
83	SHD3X36J	BRACING STRUT

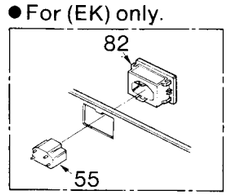
■ EXPLODED VIEW



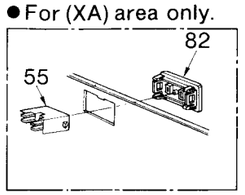
● For (XL) only

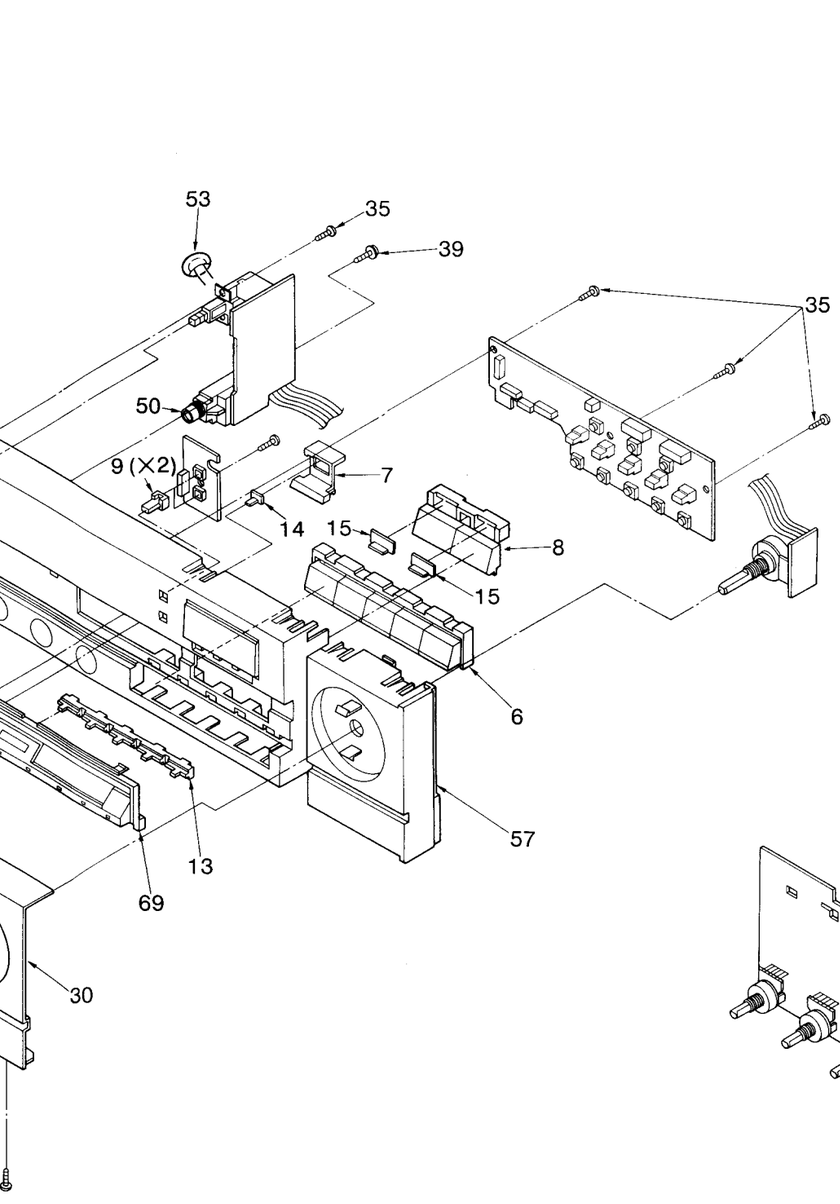


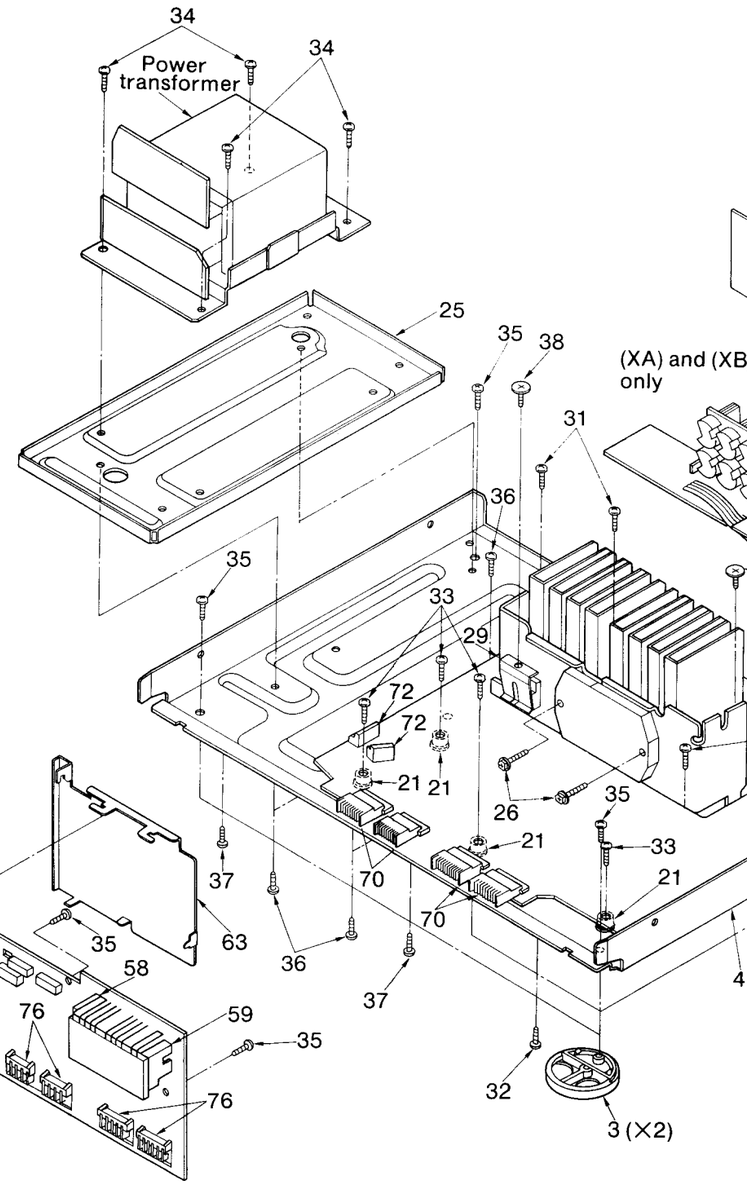
● For (EK) only.

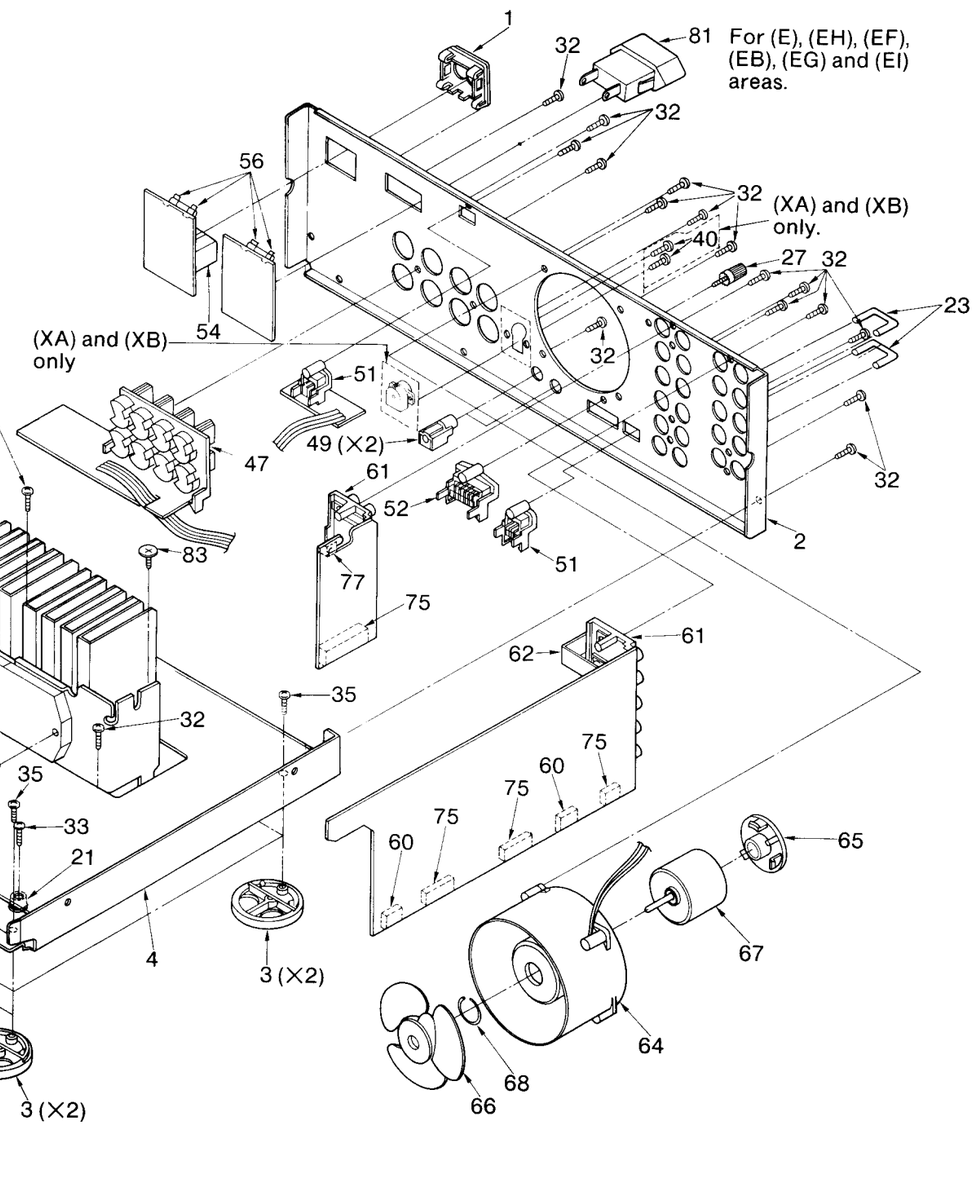


● For (XA) area only.









■ FUNCTIONS OF IC TERMINALS

•IC601 (M50754-411SP)

Pin No.	I/O	Terminal Name	Function
1	I	V_{DD}	To be connected to a power supply.
2	O	LCD	This is the output terminal for the LED selector indicator of the CD player. At a "HI" level ..... the LED lights up.
3	——	CS2	For ground connection.
4	I	VR1	These are the terminals for the rotary encoder of the volume of VR601.
5		VR0	
6	O	PWM	This terminal outputs the signal for the control of the volume and balance.
7	I	$\overline{REC}$	This is the terminal for the detection of recording on the deck.
8	O	SY OUT	This is the terminal for synchro recording on the deck.
9	I	$\overline{DECK}$	This is the terminal for direct operations on the deck.
10	I	CDE	Outputs the signal for the control of CD editing.
11	I	$\overline{CD}$	These are the terminals for the start of synchronization on the CD unit.
12		CD. SY.	
13	I	PL. SY.	These are the terminals for sync recording on the player.
14	O	PL. START	
15	O	PL. $\overline{STOP}$	
16	O	DATA	CLK: This terminal outputs the clock signal for reading serial data. DATA: This terminal outputs the serial data. STB: This terminal outputs the pulse for the control of the setting of the analog switch. The serial data inputted into IC201 is latched by the STB pulse and the switch is set to ON according to data.
17		CLK	
18		STB	
19	O	$\overline{SURR}$	Outputs the signal for the control of SURROUND. At a "LOW" level ..... SURROUND is ON.
20	O	S. $\overline{LOUD}$	Outputs the signal for the control of SUPER DYNAMIC SOUND. At a "LOW" level ..... SUPER DYNAMIC SOUND is ON.
21	O	$\overline{MUT}$ 1	Outputs the signal for the control of muting.
22	——	SYN OUT 2	Unused.
23	O	MUTE	Outputs the −6 dB signal for the control of attenuated muting.
24	I	$\overline{HALT}$	This is the terminal for the detection of power supply.
25	I	REMOTE	Inputs data from the remote controller.
26	——	CN VSS	For ground connection.
27	I	$\overline{RESET}$	This terminal inputs the reset signal.
28	I	X IN	These are the I/O terminals for the oscillating clock signal.
29	O	X OUT	
30	——	X_C IN	Unused.
31		X_C OUT	

Pin No.	I/O	Terminal Name	Function
32	——	V_{SS}	For ground connection.
33	——	NC	Unused.
35 ≀ 37	O	S0 ≀ S2	These are the key matrix terminals for input selection.
61 ≀ 64	I	K0 ≀ K3	
38	I	V_P	The signal which pulls down the voltage is inputted into this terminal.
39 ≀ 46	O	S3 ≀ S10	These terminals output the signals for the control of the multi-digital display.
49 ≀ 52		G0 ≀ G3	
53	O	L TAPE	Outputs the signal for the control of the TAPE LED. At a "HI" level ..... the LED lights up.
54	O	L VTR	Outputs the signal for the control of the VTR LED. At a "HI" level ..... the LED lights up.
55	O	L VD	Outputs the signal for the control of the VD LED. At a "HI" level ..... the LED lights up.
56	O	L TUNER	Outputs the signal for the control of the TUNER LED. At a "HI" level ..... the LED lights up.
57	O	L PHONO	Outputs the signal for the control of the PHONO LED. At a "HI" level ..... the LED lights up.
58	O	L DAT	Outputs the signal for the control of the DAT LED. At a "HI" level ..... the LED lights up.
59	O	VTR REC MUTE	Outputs the signal for muting the VTR recording.
60	O	L MUTE	Outputs the signal for the control of the MUTING LED. At a "HI" level ..... the LED lights up.

I O	35	36	37
61	SUPER DYNAMIC SOUND	——	TAPE
62	SURROUND	DAT	CD
63	MUTING	VD	TUNER
64	——	VTR	PHONO

■ REPLACEMENT PARTS LIST

Notes : * Important safety notice :
Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
* Bracketed indications in Ref. No. columns specify the area. (Refer to the first page for area.)
Parts without these indications can be used for all areas.

●ELECTRICAL PARTS LIST

Ref. No.	Part No.	Description
INTEGRATED CIRCUITS		
IC101	AN6558F	I.C. PHONO EQ AMP
IC201	TC9164N	I.C. INPUT SELECTOR
IC301	M5238P	I.C. PHASE SHIFT
IC302	AN6554F	I.C. MIXING AMP
IC303	AN6558F	I.C. BUFFER AMP
IC304	AN6557F	I.C. BUFFER AMP
IC305	AN6557F	I.C. MIXING AMP
IC306	M51131L	I.C. ATTENUATOR
IC307	M51131L	I.C. ATTENUATOR
IC402	AN6554F	I.C. PRE AMP
IC403	AN6558F	I.C. TONE AMP
IC501	SVI3203	INTEGRATED CIRCUIT, POWER AMP
IC601	M50754-411SP	I.C. MICRO COMPUTER
IC602	MN4030B	I.C., LOGIC
IC603	MN4013B	I.C. LOGIC
IC604	AN6552F	I.C. BUFFER AMP
IC701	AN78M05R	I.C. REGULATOR
TRANSISTORS		
Q201	2SD1450RS	TRANSISTOR
Q202	2SD1450RS	TRANSISTOR
Q203	2SA1309AQS	TRANSISTOR
Q301	2SK301	TRANSISTOR
Q302	2SK301	TRANSISTOR
Q303	2SA1309AQS	TRANSISTOR
Q401	2SD1330R	TRANSISTOR
Q402	2SD1330R	TRANSISTOR
Q403	2SA1309AQS	TRANSISTOR
Q404	2SD1330R	TRANSISTOR
Q405	2SD1330R	TRANSISTOR
Q406	2SA1309AQS	TRANSISTOR
Q407	2SD1330R	TRANSISTOR
Q408	2SD1330R	TRANSISTOR
Q409	2SA1309AQS	TRANSISTOR
Q501	2SA992E	TRANSISTOR
Q502	2SC3311A-Q	TRANSISTOR
Q503	2SA1309AQS	TRANSISTOR
Q601	UN4111	TRANSISTOR
Q602	UN4111	TRANSISTOR
Q603	UN4211	TRANSISTOR
Q604	2SC3311A-Q	TRANSISTOR
Q611	UN4211	TRANSISTOR
Q612	UN4211	TRANSISTOR
Q613	UN4211	TRANSISTOR
Q614	UN4211	TRANSISTOR
Q615	UN4211	TRANSISTOR
Q616	UN4211	TRANSISTOR
Q617	UN4211	TRANSISTOR
Q618	UN4111	TRANSISTOR
Q619	UN4111	TRANSISTOR
Q621	2SC3311A-Q	TRANSISTOR
Q622	UN4211	TRANSISTOR
Q701	2SD1265-P	TRANSISTOR
Q702	2SB941PQR	TRANSISTOR
Q703	UN4211	TRANSISTOR
Q704	2SB621A-R	TRANSISTOR
DIODES		
D201	MA4051-M	DIODE
D301	MA165	DIODE
D403	MA165	DIODE
D502	MA4120	DIODE
D503	MA4120	DIODE
D505	MA167	DIODE
D506	MA167	DIODE
D507	MA165	DIODE
D601	MA165	DIODE
D602	MA165	DIODE
D603	MA165	DIODE
D605	MA165	DIODE
D606	MA165	DIODE
D607	MA165	DIODE
D608	MA700A	DIODE
D609	MA700A	DIODE
D610	MA700A	DIODE
D611	MA165	DIODE
D612	MA165	DIODE
D613	MA165	DIODE
D615	MA165	DIODE
D616	MA165	DIODE
D617	MA165	DIODE
D618	MA4100M	DIODE
D619	MA165	DIODE
D620	MA165	DIODE
D621	MA165	DIODE
D622	MA165	DIODE
D623	MA165	DIODE
D624	MA165	DIODE
D625	MA165	DIODE
D626	MA165	DIODE
D627	MA165	DIODE
D631	LN846RP-C	L.E.D
D632	LN846RP-C	L.E.D
D633	LN846RP-C	L.E.D
D634	LN0202RP2	DIODE, GAASP
D635	LN0202RP2	DIODE, GAASP
D636	LN846RP-C	L.E.D
D637	LN846RP-C	L.E.D
D638	LN873RP-LS	DIODE, SI
D641	MA165	DIODE
D642	MA165	DIODE
D643	MA165	DIODE
D644	MA165	DIODE
D645	MA165	DIODE
D646	MA165	DIODE
D647	MA165	DIODE
D648	MA165	DIODE
D649	MA165	DIODE
D701 ⚠	SVDS3V40	RECTIFIER
D702 ⚠	SVDS3V40	RECTIFIER
D703 ⚠	SVDS3V40	RECTIFIER
D704 ⚠	SVDS3V40	RECTIFIER
D705	MA4140-M	DIODE, SI
D706	MA4140-M	DIODE, SI
D707	MA29WA	DIODE
D709	MA167	DIODE
D710	MA167	DIODE
D711	MA165	DIODE
D714	MA4300M	DIODE
VARIABLE RESISTORS		
VR401	EWC2XAF20C15	V.R. BASS
VR402	EWC2XAF20C15	V.R. TREBLE
VR403	EWHFDAF20G15	V.R. BALANCE
VR601	EVQWX2F2045B	V.R., VOLUME ENCODER
COILS AND TRANSFORMERS		
L301	ELEXT100KA	COIL
L501	SLQY07G-40	CHOKE COIL
L502	SLQY07G-40	CHOKE COIL
L505 (EG, EI)	SLQY07G-40	CHOKE COIL
L506 (EG, EI)	SLQY07G-40	CHOKE COIL
L601	ELEXH101KA	COIL
L603	ELEXH330KA	COIL
L604	ELEXH330KA	COIL
L605	ELEPK1R2MA	COIL
L609	ELEXH330KA	COIL
T1 (EK, XL)	SLT5N481-W	POWER TRANSFORMER
T1 (E, EH, EF, EB) (EG, EI)	SLT5N482-W	POWER TRANSFORMER
T1 (XA, XB)	SLT5N483-W	POWER TRANSFORMER
COMPONENT COMBINATIONS		
Z601	EXFP5331MW	COMBINATION PART
Z602	EXFP7331MW	COMPONENT COMBINATION
Z603	EXBF5E103J	COMBINATION PART
Z604	EXBF8E103J	10KΩ X 8
DISPLAYS		
FL1	SADFV217	DISPLAY TUBE
FUSES		
F1 ⚠	XBA2C12TB0	FUSE T1.25A
F1 (XA, XB)	XBA2C25TB0	FUSE, T2.5A 250V
F2 ⚠ (E, EH, EF, EB) (EG, EI)	XBA2C20TB0	FUSE 250V, T2A
SWITCHES		
S601	EVQQB005R	SW
S602	EVQQB005R	SW
S603	EVQQB005R	SW
S604	EVQQB005R	SW
S605	EVQQB005R	SW
S606	EVQQB005R	SW
S607	EVQQB005R	SW
S608	EVQQB005R	SW
S609	EVQQLY07K	SW
S610	EVQQLY07K	SW
S700 ⚠	SSH1071	SW, POWER
S701 ⚠ (XA, XB)	ESE37263	SW, VOLTAGE SEL.
RELAYS		
RL501 ⚠	SSY134	RELAY
OTHERS		
X601	EF0FC4004A4	CERAMIC FILTER

●PACKING PARTS LIST

Ref. No.	Part No.	Description
PACKING MATERIAL		
A1 (E, EH, EB)	SQF13289	INSTRUCTION BOOK
A1 (EK)	SQF13290	INSTRUCTION BOOK
A1 (EF, XA)	SQF13291	INSTRUCTION BOOK
A1 (EG)	SQF13292	INSTRUCTION BOOK
A1 (EI)	SQF13293	INSTRUCTION BOOK
A1 (XL, XB)	SQF13295	INSTRUCTION BOOK
P1	SPP753	PROTECTION COVER
P2 (EK, E, EH, EB) (EG, EI, XL) (XA, XB)	SPG6352	PACKING CASE
P3	SPG6353	PACKING CASE
(EF)		
P4	SPS5182	PAD
P5	SPS5183	PAD
P6	SPS5184	PAD
P7	XZB10X30A02	PROTECTION COVER
ACCESSORIES		
A1 ⚠ (E, EH, EF, EB) (EG, EI)	SFDAC05E03	POWER CORD
A1 ⚠ (XA)	SJA168	POWER CORD
A1 ⚠ (XL)	SJA173	POWER CORD
A1 ⚠ (XB)	SJA183	POWER CORD
A1 ⚠ (EK)	SJA188	POWER CORD
A2 ⚠ (XA, XB)	RJP120ZBS-H	AC PLUG ADAPTOR

■ RESISTORS AND CAPACITORS

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Numbering System of Resistor

Example:

ERD	25	F	J	102
Type	Wattage (1/4W)	Shape	Tolerance	Value (1KΩ)
ERX	2	AN	J	471
Type	Wattage (2W)	Shape	Tolerance	Value (470Ω)

Numbering System of Capacitor

Example:

ECKD	1H	102	Z	F
Type	Voltage (50V)	Value (0.001μF)	Tolerance	Peculiarity
ECEA	50	M	330	
Type	Voltage (50V)	Peculiarity	Value (33μF)	

● Capacity are in microfarads (μF) unless specified otherwise, P = Pico-farads (pF) F = Farads (F).
● Resistance are in ohms (Ω), unless specified otherwise, 1K = 1,000Ω, 1M = 1,000kΩ

Resistor Type		Wattage		Tolerance
ERD	: Carbon	10 : 1/8W	12 : 1/2W	J : ±5%
ERG	: Metal Oxide	14 : 1/4W	25 : 1/4W	F : ±1%
ERQ	: Fuse Type Metal	1A : 1W	18 : 1/8W	G : ±2%
ERX	: Metal Film	S2 : 1/4W	S1 : 1/2W	J : ±5%
ERD L	: Carbon (chip)	2F : 1/4W	50 : 1/2W	K : ±10%
ERO K	: Metal Film (chip)	2A : 2W	3A : 3W	M : ±20%
ERC	: Solid	6G : 1/10W	8G : 1/8W	
ERF	: Incombustible Box-Shaped			
ERM	: Wire-Wound			
RRJ	: Cip Resistor			
ERJ	: Cip Resistor			

Capacitor Type		Voltage		Tolerance
ECE	: Electrolytic	0J : 6.3V	1A : 10V	K : ±10%
ECCD	: Ceramic	1C : 16V	1E : 25V	M : ±20%
ECKD	: Ceramic Capacitor	1H : 50V	1V : 35V	Z : +80 % −20
ECQM	: Poyester	50 : 50V	05 : 50V	J : ±5%
ECQP	: Polypropylene	2H : 500V	2A : 100V	G : ±2%
ECG	: Ceramic	1 : 100V	1J : 63V	F : ±1%
ECEA N	: Non Polar Electrolytic	KC : 400V AC		C : ±0.25pF
OCU	: Ceramic (Chip Type)	KC : 125V AC (UL)		D : ±0.5pF
ECUX	: Ceramic (Chip Type)			
ECF	: Semiconductor			
EECW	: Liquid electrolyte double layer capacitor			

Ref. No.	Part No.	Value.	Ref. No.	Part No.	Value.	Ref. No.	Part No.	Value.
RESISTORS(VALUE,WATTAGE)			R227	ERDS2TJ332	3.3K 1/4	R351	ERDS2TJ103	10K 1/4
R101	ERDS2TJ471	470 1/4	R228	ERDS2TJ332	3.3K 1/4	R352	ERDS2TJ103	10K 1/4
R102	ERDS2TJ471	470 1/4	R229	ERDS2TJ392	3.9K 1/4	R353	ERDS2TJ103	10K 1/4
R105	ERDS2TJ224	220K 1/4	R230	ERDS2TJ392	3.9K 1/4	R354	ERDS2TJ103	10K 1/4
R106	ERDS2TJ224	220K 1/4	R231	ERDS2TJ102	1K 1/4	R355	ERDS2TJ122	1.2K 1/4
R107	ERDS2TJ331	330 1/4	R232	ERDS2TJ102	1K 1/4	R356	ERDS2TJ122	1.2K 1/4
R108	ERDS2TJ331	330 1/4	R233	ERDS2TJ223	22K 1/4	R357	ERDS2TJ392	3.9K 1/4
R109	ERDS2TJ563	56K 1/4	R234	ERDS2TJ122	1.2K 1/4	R358	ERDS2TJ392	3.9K 1/4
R110	ERDS2TJ563	56K 1/4	R235	ERDS2TJ223	22K 1/4	R359	ERDS2TJ103	10K 1/4
R111	ERDS2TJ271	270 1/4	R236	ERDS2TJ223	22K 1/4	R360	ERDS2TJ103	10K 1/4
R112	ERDS2TJ271	270 1/4	R237	ERDS2TJ223	22K 1/4	R361	ERDS2TJ273	27K 1/4
R113	ERDS2TJ680	68 1/4	R238	ERDS2TJ152	1.5K 1/4	R362	ERDS2TJ273	27K 1/4
R114	ERDS2TJ680	68 1/4	R239	ERDS2TJ152	1.5K 1/4	R363	ERDS2TJ103	10K 1/4
R115	ERDS2TJ184	180K 1/4	R301	ERDS2TJ223	22K 1/4	R364	ERDS2TJ103	10K 1/4
R116	ERDS2TJ184	180K 1/4	R302	ERDS2TJ223	22K 1/4	R365	ERDS2TJ122	1.2K 1/4
R117	ERDS2TJ123	12K 1/4	R303	ERDS2TJ223	22K 1/4	R401	ERDS2TJ223	22K 1/4
R118	ERDS2TJ123	12K 1/4	R304	ERDS2TJ223	22K 1/4	R402	ERDS2TJ223	22K 1/4
R119	ERDS2TJ104	100K 1/4	R307	ERDS2TJ332	3.3K 1/4	R405	ERDS2TJ563	56K 1/4
R120	ERDS2TJ104	100K 1/4	R308	ERDS2TJ332	3.3K 1/4	R406	ERDS2TJ563	56K 1/4
R121	ERDS2TJ102	1K 1/4	R309	ERDS2TJ223	22K 1/4	R409	ERDS2TJ333	33K 1/4
R122	ERDS2TJ102	1K 1/4	R310	ERDS2TJ393	39K 1/4	R410	ERDS2TJ333	33K 1/4
R201	ERDS2TJ102	1K 1/4	R311	ERDS2TJ223	22K 1/4	R415	ERDS2TJ821	820 1/4
R202	ERDS2TJ102	1K 1/4	R312	ERDS2TJ393	39K 1/4	R416	ERDS2TJ821	820 1/4
R203	ERDS2TJ822	8.2K 1/4	R313	ERDS2TJ223	22K 1/4	R417	ERDS2TJ391	390 1/4
R204	ERDS2TJ822	8.2K 1/4	R314	ERDS2TJ223	22K 1/4	R418	ERDS2TJ391	390 1/4
R205	ERDS2TJ102	1K 1/4	R315	ERDS2TJ223	22K 1/4	R419	ERDS2TJ273	27K 1/4
R206	ERDS2TJ102	1K 1/4	R316	ERDS2TJ822	8.2K 1/4	R420	ERDS2TJ273	27K 1/4
R207	ERDS2TJ102	1K 1/4	R317	ERDS2TJ562	5.6K 1/4	R423	ERDS2TJ153	15K 1/4
R208	ERDS2TJ102	1K 1/4	R318	ERDS2TJ562	5.6K 1/4	R424	ERDS2TJ153	15K 1/4
R211	ERDS2TJ822	8.2K 1/4	R319	ERDS2TJ562	5.6K 1/4	R425	ERDS2TJ152	1.5K 1/4
R212	ERDS2TJ822	8.2K 1/4	R320	ERDS2TJ224	220K 1/4	R426	ERDS2TJ152	1.5K 1/4
R213	ERDS2TJ471	470 1/4	R321	ERDS2TJ332	3.3K 1/4	R427	ERDS2TJ152	1.5K 1/4
R214	ERDS2TJ471	470 1/4	R322	ERDS2TJ332	3.3K 1/4	R428	ERDS2TJ152	1.5K 1/4
R215	ERDS2TJ182	1.8K 1/4	R324	ERDS2TJ332	3.3K 1/4	R429	ERDS2TJ182	1.8K 1/4
R216	ERDS2TJ182	1.8K 1/4	R325	ERDS2TJ392	3.9K 1/4	R430	ERDS2TJ182	1.8K 1/4
R217	ERDS2TJ472	4.7K 1/4	R326	ERDS2TJ392	3.9K 1/4	R431	ERDS2TJ102	1K 1/4
R218	ERDS2TJ472	4.7K 1/4	R327	ERDS2TJ104	100K 1/4	R432	ERDS2TJ102	1K 1/4
R221	ERDS2TJ102	1K 1/4	R328	ERDS2TJ104	100K 1/4	R433	ERDS2TJ223	22K 1/4
R222	ERDS2TJ102	1K 1/4	R329	ERDS2TJ103	10K 1/4	R434	ERDS2TJ105	1M 1/4
R223	ERDS2TJ821	820 1/4	R330	ERDS2TJ473	47K 1/4	R435	ERDS2TJ334	330K 1/4
R224	ERDS2TJ821	820 1/4	R331	ERDS2TJ393	39K 1/4	R436	ERDS2TJ103	10K 1/4
			R332	ERDS2TJ104	100K 1/4	R437	ERDS2TJ473	47K 1/4

Ref. No.	Part No.	Value.	Ref. No.	Part No.	Value.	Ref. No.	Part No.	Value.
R438	ERDS2TJ105	1M 1/4	R624	ERDS2TJ223	22K 1/4	C251	RCBC1H101KBY	100P 50
R439	ERDS2TJ103	10K 1/4	R625	ERDS2TJ104	100K 1/4	(EG, EI)		
R442	ERDS2TJ272	2.7K 1/4	R626	ERDS2TJ105	1M 1/4	C252	RCBC1H101KBY	100P 50
R443	ERDS2TJ102	1K 1/4	R627	ERDS2TJ102	1K 1/4	(EG, EI)		
R444	ERDS2TJ102	1K 1/4	R628	ERDS2TJ104	100K 1/4	C253	RCBC1H101KBY	100P 50
R451	ERDS2TJ224	220K 1/4	R631	ERDS2TJ102	1K 1/4	(EG, EI)		
R452	ERDS2TJ224	220K 1/4	R632	ERDS2TJ102	1K 1/4	C254	RCBC1H101KBY	100P 50
R453	ERDS2TJ474	470K 1/4	R633	ERDS2TJ153	15K 1/4	(EG, EI)		
R454	ERDS2TJ474	470K 1/4	R634	ERDS2TJ153	15K 1/4	C255	RCBC1H101KBY	100P 50
R455	ERDS2TJ102	1K 1/4	R635	ERDS2TJ473	47K 1/4	(EG, EI)		
R456	ERDS2TJ102	1K 1/4	R636	ERDS2TJ473	47K 1/4	C256	RCBC1H101KBY	100P 50
R457	ERDS2TJ822	8.2K 1/4	R637	ERDS2TJ330	33 1/4	(EG, EI)		
R458	ERDS2TJ822	8.2K 1/4	R638	ERDS2TJ101	100 1/4	C257	RCBC1H101KBY	100P 50
R461	ERDS2TJ223	22K 1/4	R639	ERDS2TJ101	100 1/4	(EG, EI)		
R462	ERDS2TJ223	22K 1/4	R640	ERDS2TJ105	1M 1/4	C258	RCBC1H101KBY	100P 50
R463	ERDS2TJ392	3.9K 1/4	R641	ERDS2TJ220	22 1/4	(EG, EI)		
R464	ERDS2TJ392	3.9K 1/4	R645	ERDS2TJ102	1K 1/4	C259	RCBC1H101KBY	100P 50
R465	ERDS2TJ333	33K 1/4	R646	ERDS2TJ102	1K 1/4	(EG, EI)		
R466	ERDS2TJ333	33K 1/4	R651	ERDS2TJ221	220 1/4	C260	RCBC1H101KBY	100P 50
R467	ERDS2TJ182	1.8K 1/4	R652	ERDS2TJ221	220 1/4	(EG, EI)		
R468	ERDS2TJ182	1.8K 1/4	R653	ERDS2TJ221	220 1/4	C261	RCBC1H101KBY	100P 50
R469	ERDS2TJ821	820 1/4	R654	ERDS2TJ151	150 1/4	(EG, EI)		
R470	ERDS2TJ821	820 1/4	R655	ERDS2TJ151	150 1/4	C262	RCBC1H101KBY	100P 50
R471	ERDS2TJ152	1.5K 1/4	R656	ERDS2TJ221	220 1/4	(EG, EI)		
R472	ERDS2TJ152	1.5K 1/4	R657	ERDS2TJ221	220 1/4	C263	RCBC1H101KBY	100P 50
R473	ERDS2TJ152	1.5K 1/4	R658	ERDS2TJ331	330 1/4	(EG, EI)		
R474	ERDS2TJ152	1.5K 1/4	R659	ERDS2TJ121	120 1/4	C264	RCBC1H101KBY	100P 50
R475	ERDS2TJ102	1K 1/4	R660	ERDS2TJ121	120 1/4	(EG, EI)		
R476	ERDS2TJ102	1K 1/4	R701	ERD25FJ3R3	3.3 1/4	C265	RCBC1H101KBY	100P 50
R477	ERDS2TJ223	22K 1/4	R702	ERD25FJ3R3	3.3 1/4	(EG, EI)		
R478	ERDS2TJ272	2.7K 1/4	R703	ERDS2TJ682	6.8K 1/4	C266	RCBC1H101KBY	100P 50
R501	ERDS2TJ222	2.2K 1/4	R704	ERDS2TJ682	6.8K 1/4	(EG, EI)		
R502	ERDS2TJ222	2.2K 1/4	R705	ERDS2TJ333	33K 1/4	C267	RCBC1H101KBY	100P 50
R503	ERDS2TJ563	56K 1/4	R706	ERDS1FJ100	10 1/2	(EG, EI)		
R504	ERDS2TJ563	56K 1/4	R707	ERDS2TJ222	2.2K 1/4	C268	RCBC1H101KBY	100P 50
R505	ERDS2TJ222	2.2K 1/4	R708	ERDS2TJ682	6.8K 1/4	(EG, EI)		
R506	ERDS2TJ222	2.2K 1/4	R710	ERDS1FJ331	330 1/2	C269	RCBC1H101KBY	100P 50
R507	ERDS2TJ563	56K 1/4	R711	ERDS2TJ272	2.7K 1/4	(EG, EI)		
R508	ERDS2TJ563	56K 1/4	R712	ERDS2TJ684	680K 1/4	C270	RCBC1H101KBY	100P 50
R509	ERDS1FJ100	10 1/2	R713	ERDS2TJ154	150K 1/4	(EG, EI)		
R510	ERDS1FJ100	10 1/2	CAPACITORS(VALUE,VOLTAGE)			C271	RCBC1H101KBY	100P 50
R511	ERDS1FJ100	10 1/2	C101	RCBC1H180JLY	18P 50	(EG, EI)		
R512	ERDS1FJ100	10 1/2	(EG, EI)			C272	RCBC1H101KBY	100P 50
R513	ERDS2TJ222	2.2K 1/4	C102	RCBC1H180JLY	18P 50	(EG, EI)		
R514	ERDS2TJ222	2.2K 1/4	(EG, EI)			C307	RCBC1H680JLY	68P 50
R515	ERDS2TJ473	47K 1/4	C103	RCBC1H151KBY	150P 50	C308	ECFTD823KXL	0.082 25
R517	ERG1ANJ331	330 1	(EG, EI)			C309	ECEA1EK3R3B	3.3 25
R518	ERG1ANJ331	330 1	C104	RCBC1H151KBY	150P 50	C310	RCBS1H221KBY	220P 50
R519	ERDS2TJ223	22K 1/4	(EG, EI)			C311	ECEA1EK3R3B	3.3 25
R520	ERG1ANJ561	560 1	C105	ECEA1HPS3R3	3.3 50	C313	RCBS1H820KBY	82P 50
R523	ERDS2TJ223	22K 1/4	C106	ECEA1HPS3R3	3.3 50	C314	RCBS1H820KBY	82P 50
R524	ERDS2TJ223	22K 1/4	C107	RCBC1H101KBY	100P 50	C315	ECEA1HPS3R3	3.3 50
R525	ERDS2TJ103	10K 1/4	C108	RCBC1H101KBY	100P 50	C316	ECEA1HPS3R3	3.3 50
R526	ERDS1FJ331	330 1/2	C109	ECBT1H102KB	0.001 50	C317	ECFTD104KXL	0.1 25
R527	ERDS2TJ153	15K 1/4	C110	ECBT1H102KB	0.001 50	C318	ECKD1H223PF	0.022 50
R528	ERDS2TJ103	10K 1/4	C111	ECEA0JPS330	33 6.3	C351	ECBT1E103ZF	0.01 25
R559	ERDS1FJ100	10 1/2	C112	ECEA0JPS330	33 6.3	C352	ECBT1E103ZF	0.01 25
(EG, EI)			C115	ECFTD223KXL	0.022 25	C353	RCBS1H330JLY	33P 50
R560	ERDS1FJ100	10 1/2	C116	ECFTD223KXL	0.022 25	C354	RCBS1H330JLY	33P 50
(EG, EI)			C117	ECFTD682KXL	0.0068 25	C355	ECEA1HPS3R3	3.3 50
R601	ERDS2TJ223	22K 1/4	C118	ECFTD682KXL	0.0068 25	C356	ECEA1HPS3R3	3.3 50
R602	ERDS2TJ103	10K 1/4	C119	ECEA1HPS3R3	3.3 50	C357	ECEA1HPS3R3	3.3 50
R603	ERDS2TJ103	10K 1/4	C120	ECEA1HPS3R3	3.3 50	C358	ECEA1HPS3R3	3.3 50
R610	ERDS2TJ470	47 1/4	C121 ⚠	ECFTD103KXL	0.01 25	C359	RCBS1H330JLY	33P 50
R611	ERDS2TJ470	47 1/4	C122 ⚠	ECFTD103KXL	0.01 25	C360	RCBS1H330JLY	33P 50
R612	ERDS2TJ470	47 1/4	C123	ECKD1H473ZF	0.047 50	C361	ECEA1HPS3R3	3.3 50
R613	ERDS2TJ470	47 1/4	C124 ⚠	ECFTD103KXL	0.01 25	C362	ECEA1HPS3R3	3.3 50
R614	ERDS2TJ470	47 1/4	(EG, EI)			C363	ECEA1HPS3R3	3.3 50
R615	ERDS2TJ470	47 1/4	C220	ECKD1H473ZF	0.047 50	C364	ECEA1HPS3R3	3.3 50
R616	ERDS2TJ470	47 1/4	C221	ECEA1CKS100	10 16	C365	ECEA1CK220	22 16
R617	ERDS2TJ470	47 1/4	C222	ECEA1CK220	22 16	C367	ECEA1CK220	22 16
R618	ERDS2TJ822	8.2K 1/4	C223	ECEA1CK220	22 16	C369	ECEA1CK220	22 16
R619	ERDS2TJ272	2.7K 1/4	C224	ECKD1H223PF	0.022 50	C370	ECEA1CK220	22 16
R620	ERDS2TJ272	2.7K 1/4	C225	ECKD1H223PF	0.022 50	C373	RCBS1H820KBY	82P 50
R621	ERDS2TJ272	2.7K 1/4	C226	ECKD1H473ZF	0.047 50	(EG, EI)		
R622	ERDS2TJ332	3.3K 1/4	C227	ECQV1H104JZ	0.1 50	C374	RCBS1H820KBY	82P 50
R623	ERDS2TJ223	22K 1/4				(EG, EI)		

Ref. No.	Part No.	Value.
C401	ECEA1EK3R3B	3.3 25
C402	ECEA1EK3R3B	3.3 25
C409	RCBC1H101KBY	100P 50
C410	RCBC1H101KBY	100P 50
C411	RCBS1H100JLY	10P 50
C412	RCBS1H100JLY	10P 50
C413	ECEA1HK2R2B	2.2 50
C414	ECEA1HK2R2B	2.2 50
C419	ECFTD473KXL	0.047 25
C420	ECFTD473KXL	0.047 25
C421	ECEA1HK2R2B	2.2 50
C422	ECEA1HK2R2B	2.2 50
C423	ECEA1HPS3R3	3.3 50
C424	ECEA1HPS3R3	3.3 50
C425	ECEA1HPS3R3	3.3 50
C426	ECEA1HPS3R3	3.3 50
C427	ECEA1HPS3R3	3.3 50
C428	ECEA1HPS3R3	3.3 50
C431	ECEA1HKR47	0.47 50
C432	ECEA1HK010	1 50
C451	RCBC1H101KBY	100P 50
C452	RCBC1H101KBY	100P 50
C453	RCBC1H680JLY	68P 50
C454	RCBC1H680JLY	68P 50
C455	ECBT1H821KB	820P 50
C456	ECBT1H821KB	820P 50
C457	ECFTD123KXL	0.012 25
C458	ECFTD123KXL	0.012 25
C459	ECFTD683KXL	0.068 25
C460	ECFTD683KXL	0.068 25
C461	ECEA1HPS010	1 50
C462	ECEA1HPS010	1 50
C463	ECFTD472KXL	0.0047 25
C464	ECFTD472KXL	0.0047 25
C465	ECFTD223KXL	0.022 25
C466	ECFTD223KXL	0.022 25
C467	ECEA1HPS3R3	3.3 50
C468	ECEA1HPS3R3	3.3 50
C469 ⚠	ECFTD103KXL	0.01 25
C470 ⚠	ECFTD103KXL	0.01 25
C471	ECEA1CK470	47 16
C501	ECEA1HPS3R3	3.3 50
C502	ECEA1HPS3R3	3.3 50
C503	ECBT1H821KB	820P 50
C504	ECBT1H821KB	820P 50
C505	ECEA1CPS220	22 16
C506	ECEA1CPS220	22 16
C507	RCBS1H6R8KLY	6.8P 50
C508	RCBS1H6R8KLY	6.8P 50
C509	RCBC1H151KBY	150P 50
C509	RCBS1H271KBY	270P 50
(EG, E1)		
C510	RCBC1H151KBY	150P 50
C511	ECFTD473KXL	0.047 25
C512	ECFTD473KXL	0.047 25
C513	ECEA0JU331	330 6.3
C514	ECEA1HKR22	0.22 50
C515	ECEA0JK330	33 6.3
C516	ECKD1H103PF	0.01 50
(EG, E1)		
C517	ECEA50N2R2	2.2 50
(EG, E1)		
C518	ECEA1CKS100	10 16
C519	ECEA1CK470	47 16
C520	ECEA1CK101	100 16
C521	ECFTD473KXL	0.047 25
C522	ECFTD473KXL	0.047 25
C523	ECKD1H102KB	0.001 50
C524	ECKD1H102KB	0.001 50
C561	ECKD1H102KB	0.001 50
(EG, E1)		
C562	ECKD1H102KB	0.001 50
(EG, E1)		
C563	ECKD1H223PF	0.022 50
(EG, E1)		
C564	ECKD1H223PF	0.022 50
(EG, E1)		
C597	RCBS1H221KBY	220P 50
(EG, E1)		
C598	RCBS1H221KBY	220P 50
(EG, E1)		
C600	ECEA1CK100E	10 16
C601	ECEA1CK101	100 16
C602	ECKD1H223PF	0.022 50
C603	ECEA1HK010	1 50
C604	ECFTD333KXL	0.033 25
C605	ECFTD683KXL	0.068 25
C606	ECEA1EK4R7	4.7 25
C607	ECEA1HK010	1 50
C608	ECBT1H102KB	0.001 50
C609	ECBT1H102KB	0.001 50
C610	ECEA1CKS100	10 16
C611	RCBC1H101KBY	100P 50
C612	RCBC1H101KBY	100P 50
C613	RCBS1H221KBY	220P 50
C614	RCBS1H221KBY	220P 50
C615	ECEA1VKA330	33 35
C616	ECEA1HK2R2B	2.2 50
C617	ECEA1HK2R2B	2.2 50
C618	ECKD1H223PF	0.022 50
C619 ⚠	ECFTD103KXL	0.01 25
C620	ECKD1H103PF	0.01 50
C621	ECKD1H103PF	0.01 50
C622	ECKD1H103PF	0.01 50
C623	ECKD1H103PF	0.01 50
C624	ECKD1H103PF	0.01 50
C625	ECKD1H103PF	0.01 50
C626	ECKD1H103PF	0.01 50
C627	ECKD1H103PF	0.01 50
C628	ECKD1H103PF	0.01 50
C629	ECKD1H102KB	0.001 50
C630	ECKD1H103PF	0.01 50
C631	ECKD1H103PF	0.01 50
C632	ECKD1H103PF	0.01 50
C697	ECQV1H474JZ3	0.47 50
C698	RCBS1H221KBY	220P 50
C699	RCBS1H221KBY	220P 50
C700 ⚠	ECKDKC103PF2	0.01 125
C701	ECETS56V472U	4700 56
C702	ECETS56V472U	4700 56
C703 ⚠	ECFTD103KXL	0.01 25
C704 ⚠	ECFTD103KXL	0.01 25
C705	ECEA1CU470	47 16
C706	ECEA1CU470	47 16
C707	ECEA1CK220	22 16
C708	ECEA1CK220	22 16
C709	ECQE2104KS	0.1 250
C710	ECEA1HK4R7	4.7 50
C711	ECEA1VK100B	10 35
C712	ECEA1VU330	33 35
C713	ECEA1CKS100	10 16
C714	ECEA1HK010	1 50
C715	ECFTD473KXL	0.047 25
(EG, E1)		
C716	ECKD1H103PF	0.01 50
(EG, E1)		

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